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THE FRIEDMANN TREATMENT FOR TUBERCULOSIS.

ITS INVESTIGATION BY THE UNITED STATES PUBLIC HEALTH SERVICE.

On March 8 the Secretary of the Treasury, on the recommendation of the Surgeon General of the Public Health Service, caused a board of medical officers to be detailed to make a thorough investigation of Dr. Friedmann's alleged cure for tuberculosis.

These officers proceeded immediately to New York and arranged with Dr. Friedmann for demonstrations of his remedy upon persons suffering from tuberculosis. These demonstrations are being carried on in certain New York hospitals through the courtesy of their respective authorities, and will be continued until sufficient information has been obtained for the forming of an opinion as to the merits of the treatment.

Dr. Friedmann has submitted to the board a culture of the bacteria which he states are used in his method of treatment. In addition to the observation of persons under treatment by Dr. Friedmann, the board of officers will make experiments to ascertain whether this culture is, as Dr. Friedmann claims, harmless to warm-blooded animals.

Considerable time will necessarily be required to carry out these investigations. The work will be carried on as rapidly as possible.

In the meantime the public is informed of the inadvisability of tuberculous patients traveling long distances in the hope of receiving the treatment. Those to whom it is administered for demonstration purposes are selected by the hospital authorities from among their patients; the number selected constituting only a small proportion of available volunteers.

Certain statements purporting to be expressions of the opinion of the board of officers of the Public Health Service carrying on the investigation have appeared in the newspapers. These officers have expressed no opinion and will not be in position to do so until the work has advanced sufficiently far to warrant some conclusion in regard to Dr. Friedmann's treatment.

SANITARY CONDITIONS IN ALASKA.

By EMIL KRULISH, Passed Assistant Surgeon, United States Public Health Service.

During the period from April to November, 1912, I had the opportunity to visit the towns and native villages on the southern coast of Alaska, in Cook Inlet, on the Yukon River, and on the coast of Bering Sea. The area of the Territory of Alaska is approximately one-fifth that of the United States. Transportation facilities are inadequate, uncertain, and at times difficult. On my tour of investigation I traveled on the regular passenger steamers, in private launches, by teams, on railroad trains, and on revenue cutters. The distance covered was approximately 7,000 miles.

Throughout my itinerary study was made of the sanitary conditions in the settlements and native villages and of the prevailing diseases in each section. Physicians and other persons who possessed knowledge of the conditions in which I was interested were interviewed. As many natives as possible were examined, and in these examinations special effort was made to determine the number suffering with tuberculosis, trachoma, or venereal disease.

POPULATION.

The population of Alaska, according to the census of 1910, was 64,356; 36,347 were whites and 28,009 were natives and others; 25,331 were natives. The native population had decreased 14.5 per cent between 1900 and 1910.

The towns and native villages are located either on the coast or on the bank of a river. These settlements range from 40 to 3,500 people. Fifteen of the towns are incorporated and have a combined population of about 18,000. These towns have a mayor, council, and other municipal officers provided for by the Alaska code.

The native population is distributed over Alaska as follows: The Indians are located in southeastern Alaska and on the upper Yukon River and the Aleuts in the vicinity of Cook Inlet and the Aleutian Islands, while the Eskimos live on the lower Yukon River, the Kuskokwim River, and along the coast of Bering Sea north to Point Barrow.

With the exception of the incorporated villages, the enforcement of the registration of births and deaths in a country like Alaska, in which the population is scattered over a large territory in isolated districts, is rather difficult and unsatisfactory. Although the councils of two towns have adopted ordinances providing for such registration, the records are not kept accurately and therefore are valueless. The registration of births and deaths is important, and should be under the supervision of the Federal Government. An excellent bill providing for this work in Alaska is now pending before Congress.

The teachers in the Alaska school service have been reporting monthly the births and deaths among the natives in the vicinity of the schools. During the school year of 1912 the birth rate varied in different sections from 26 to 43 per thousand inhabitants, while the death rate was 19 to 36 per thousand. The birth rate exceeded the death rate in all districts with the exception of the southeastern, where the death rate exceeded the birth rate by 6 per thousand. These figures are compiled from data from 52 schools, and are based on an approximate population of 7,118 natives.

Circular letters have recently been sent to all teachers in the school service calling their attention to the importance of these reports, and directing them to collect and report these data with care and accuracy.

CLIMATE.

The climate varies in different sections of Alaska from the temperate to the extremely frigid, as it does in the United States. The Japan current, has a great influence on the climate of the southern coast. There the winters are mild while the summers are quite warm; the rainfall in the southeastern section is heavy throughout the year; about 100 inches. Farther west, in the vicinity of Cook Inlet, the precipitation is much less; the climate is drier, but the winters are colder. On Bering Sea it is comparatively dry, the summers are short and quite warm, but the winters are cold. The climate of the interior, on the Yukon River, is the driest in Alaska, and the range of temperature is the greatest. The winters are extremely cold, 70° below zero F., while the summers are hot but short. The summers are very short on the Arctic coast and the winters long and very cold, but the temperature does not drop as low as it does in the interior and it is comparatively dry. The region north of the coast and beyond the influence of the warm current is frozen during seven or eight months of the year.

HABITATIONS.

The style of homes in Alaska varies according to the climate and the material available for building purposes. There are practically no brick or stone buildings in the country. On the southern coast the houses are built of lumber or logs; even the natives in southeastern Alaska live in large frame houses. On the Yukon, where timber is plentiful and freight rates are prohibitive the prevailing type of dwelling is the log house, which is well adapted to the climate of that section. The natives of Bristol Bay and the Kuskokwim live in sod houses, while along the lower Yukon, and on Bering Sea, and the Arctic coast, where no natural timber is available, and driftwood supplies both fuel and building material, the homes are small and constructed of pieces of board, store boxes, tin, tar paper, and sod. As fuel is scarce these homes are small, usually having but one room.

The whites live in frame or log houses, and as a general rule have better homes than the natives. The houses of the half breeds are also usually an improvement over those occupied by the full bloods.

WATER SUPPLY.

The towns along the southern coast are usually supplied with excellent spring water which is piped into the houses, while rain and seepage water is used by natives in the villages. In Cook Inlet a number of the settlements have shallow wells which are fairly well protected. On the Yukon the river water is used for domestic purposes; in winter this is obtained through a hole in the ice. On the Bering Sea both St. Michael and Nome are supplied with spring water which is piped into the town during four months of the year, while the remainder of the year it has to be hauled from these springs and distributed to the dwellings in buckets. Along the Arctic coast either rain or river water is used in the summer and melted snow and ice in winter.

In spite of the favorable conditions present for contamination of the water supply, there are no water-borne diseases in Alaska. The few cases of typhoid that have been reported in the Territory have been imported into the country from the outside.

DISPOSAL OF SEWAGE AND GARBAGE.

As the settlements in Alaska are usually located on some body of water, the problem of drainage is a simple one. The larger towns on the southern coast are supplied with sewers which carry off excreta and other waste matter into the sea. Garbage and refuse are disposed of by burning or dumping into the sea and are then carried off by the tide. On the Yukon, in summer, garbage is usually dumped into the river at some distance below the town and in winter it is deposited on the ice where it remains until the break up in the summer, when it is carried to the sea. In communities not supplied with sewers, ordinary house drainage is disposed of by emptying on the ground or into pits, while human excreta is disposed of in privies, the pail system being in use in towns on the Bering Sea.

The methods of disposal of refuse in the native villages vary in different sections. On the sea coast, garbage and rubbish are thrown into the sea, while in settlements located on rivers they are thrown into the river. During the winter months the refuse is allowed to accumulate in the villages and is usually cleaned up in the spring and disposed of. This clean-up is generally forced upon the natives by the teacher of the school in the village. In a few communities the natives have privies, which are not, however, constructed on sanitary principles, but the majority of the settlements have no such provi-

sion but deposit the excreta promiscuously. The Public Health Service bulletin, "The sanitary privy," has recently been distributed to the superintendents and physicians in the Alaska school service.

DISPOSAL OF DEAD BODIES.

The bodies of the dead are usually buried under ground both by whites and natives, but there are still a few communities in Alaska where they are deposited on the ground and covered with stones or logs, or placed on a litter above ground.

MORBIDITY.

As a general rule there is little sickness in Alaska, for the climate is conducive to healthfulness, and, with the exception of diseases like pneumonia, rheumatism, and tonsilitis, the white population is unusually healthy. The natives, however, are afflicted with many ailments, which are chiefly the result of their unhygienic living and the lack of facilities for treatment and isolation of the infected. Tuberculosis, eye affections, and venereal diseases are the most important.

Other conditions and diseases which I found among the natives were heart disease, stomach troubles, adenoids, hysteria, locomotor ataxia, pleurisy, scabies, impetigo, scrofula, rachitis, epilepsy, one case of feeble-minded, and two deaf-mutes.

Erysipelas, smallpox, measles, infantile paralysis, chicken pox, and influenza have occurred in epidemics. The case mortality among the natives in these epidemics has been exceedingly high.

It is interesting to note that the natives living in villages which are adjacent to white settlements are more diseased than those living in isolated districts.

Eye diseases.

Diseases of the eye are most prevalent in southeastern Alaska; about 23 per cent of the natives in this section show evidence of having had eye trouble at some time, while the Eskimos are the least affected—only 6 per cent—although snow blindness is common in the spring. Trachoma, keratitis, cataracts, blepharitis, and conjunctivitis are the common eye diseases, and are the causes of blindness and corneal opacities. A large part of the blindness and partial loss of vision among the natives of Alaska might have been prevented by treatment of these cases in the early stages of the disease.

Trachoma.

Trachoma is most prevalent among the natives of southwestern Alaska—13 per cent—but comparatively absent in the Eskimos. No cases of the disease have been observed among them by me

although several have been reported by other physicians. It is my opinion that trachoma was introduced into Alaska by the Russians in the early days, for it is common in the regions formerly settled by them and absent in others. Trachoma is the common cause of blindness among the natives.

I have repeatedly selected entire families out of a group of natives by examination of their eyelids. In these instances, usually, the mother was partially blind, the older children exhibited the disease in the advanced stage, while the youngest children showed signs of but recent infection.

Tuberculosis.

Tuberculosis is comparatively rare among the whites but in the natives it is present in all its forms and stages. The percentage of tuberculosis and the type of the disease vary in different parts of the Territory; the pulmonary form is most common among the Eskimos, while tuberculosis of the bones is most prevalent among the natives along the southern coast. I have seen several cases of Potts disease of the spine followed by paralysis of the lower limbs from pressure on the cord.

The climate, type of dwelling, and mode of living are directly responsible for the difference in various sections. In southern Alaska the Indians live out of doors, in camps, for a greater number of months in the year than the Eskimos of the north, who for eight months are confined in small, crowded, unventilated one-room homes, in which all crevices are sealed to keep out the cold.

The benefit of ventilation and fresh air is clearly demonstrated by the improvement observed in tuberculous natives on their return to the villages from the summer camps. This annual outing prolongs the lives of many of those affected.

Of the natives examined about 15 per cent had tuberculosis, including all forms and both the active and latent types. In 7 per cent the disease was present in the active stage. Considering the unhygienic conditions in the average native home and that the opportunity for the spread of the infection is ever present, this is a remarkably low percentage.

Syphilis.

It is rather difficult to determine accurately the number of natives who are infected with syphilis, for this disease is not always manifested externally. Some of the blindness and a large percentage of the corneal opacities appear to be due to keratitis, the result of inherited syphilis.

Syphilis in the Alaskan natives usually has ulcerative manifestations, and some of these cases have been erroneously diagnosed as leprosy.

Smallpox.

Occasional epidemics of smallpox have occurred in different localities in Alaska, and last year it was present in Dawson, Yukon Territory, and among the natives on the boundary line. This is essentially an imported disease; it is carried into the Territory from the States. Hundreds of people enter Alaska each spring from all parts of the United States to work in the mines and canneries during the summer season, and the danger of bringing smallpox or other contagious diseases into the country is always present. It is therefore important to take precautions and carefully examine and vaccinate at the port of embarkation all persons coming to Alaska. Many of the localities to which these laborers go are isolated and out of reach of any medical supervision, and in the event of the appearance of an epidemic the situation would be difficult to control and expensive to manage.

Infantile paralysis.

The history of infantile paralysis and deformities resulting therefrom has come to my notice among the natives at Seldovia, Klukwan, Sitka, Unalakleet, and St. Michael.

FOOD POISONING.

Ptomaine poisoning has been reported to be not uncommon among the natives, and occasionally a case is reported to occur among the whites. The condition is alleged to be especially common in the isolated districts in which large quantities of canned foods are consumed.

In some parts of the Territory the natives eat fish heads which have been previously buried in the ground until they have undergone putrefaction; this dish they consider quite a delicacy. I have treated seven cases of poisoning due to the eating of putrid moose meat.

CARE OF PREMISES.

The danger of spreading disease in Alaska by contaminated water, food, and insanitary premises is apparently present, but water-borne diseases as previously stated are unknown in the Territory.

Although the premises in the native villages appear in disorder and unclean with cans, rags, animal matter, and other refuse scattered promiscuously, infection is not acquired through this medium. It is in the crowded, unventilated homes, where all eat out of the same dish, drink from the same teapot spout, use the same towel, and expectorate on the floor, that the principal danger of contagion exists and that tuberculosis and trachoma are most frequently contracted.

The sanitary conditions in the white settlements and homes are usually better than those of the natives, but I have seen some that were equally bad.

CONDITIONS IN THE VOLCANIC DISTRICT.

Directly after the eruption of Mount Katmai I proceeded to Kodiak and Afognak to render assistance to the refugees in the volcanic district and to supervise any sanitary measures that might be necessary. At Kodiak I found Dr. Silverman, the local physician, attending to the sick and directing the sanitary work, while Asst. Surg. Brecht, attached to the revenue cutter *Manning*, supervised the work at Afognak. There was no loss of life due directly to the eruption, but many persons suffered with inflammation of the throat and eyelids, caused by irritation from the floating dust.

HEALTH LAWS IN ALASKA.

The health laws applicable to the Territory of Alaska are the national quarantine act and the Alaska Code. In the latter, Chapter X deals with "offenses against the public health," and provides against selling unwholesome provisions; adulterating provisions, drugs or medicines; polluting water used for domestic purposes; spreading dangerous diseases; and selling poisons without label. In addition, the councils of incorporated towns have the power "to take such action by ordinance, resolution, or otherwise as may be necessary to protect and preserve the lives, the health, the safety, and the well-being of the people in the town, and to publish such ordinances."

In order to obtain reliable information of the activities of the principal municipalities in Alaska in safeguarding the public health, the mayors of all incorporated towns were requested to furnish copies of all ordinances and regulations on matters pertaining to public health adopted by the council under the above authority. The subjects upon which information was especially desired were indicated to be: Vaccination; the report of births, deaths, and infectious diseases; disposal of sewage and garbage; interment and disinterment of bodies; and the destruction, and prevention of propagation, of flies.

All the towns from which these ordinances were received made provisions for the appointment of a health officer, the disposal of garbage and sewage, the abatement of nuisances, and the isolation of cases of contagious diseases. No community in Alaska has an ordinance relating to the disposal of bodies; the destruction, and prevention of propagation, of flies; or for compulsory vaccination, except that the council of one town has the authority to direct the health officer to vaccinate persons in case of an actual epidemic of

smallpox. The health officer of a certain town in Alaska drafted an ordinance directed against flies and the spread of disease by insect life, but the council would not pass it because its drastic requirements would entail great expense.

There is no reason, therefore, why any incorporated community in Alaska should be without adequate health protection, the extent of this legislation depending entirely upon the desires of the people in each community. The majority of the towns are fairly well protected in this respect, although the laws are not well enforced. This neglect is doubtless due to the prevailing idea of and faith in the superlative healthfulness of the climate. This may be partially true in reference to the white settlements, but in native villages the enforcement of sanitary laws is of the utmost importance. These villages are located in isolated districts and with a few exceptions are beyond the jurisdiction of any incorporated town.

PLAGUE.

A NOTE ON THE HISTORY OF THE DISEASE IN HONGKONG.

By B. W. BROWN, Surgeon, United States Public Health Service.

The importance of Hongkong as a shipping port, and the fact that vessels from all parts of the world call at this port, not only for cargo, but for repairs, thus affording special opportunities for rat infestation, makes the history of plague in the colony of Hongkong of interest and importance to health officers at every seaport. There is little doubt that certain of the plague epidemics of recent years in various ports of the world could be traced to rat infestation at Hongkong.

The first mention of plague in China, as far as I can ascertain, was in 1844, just after the Egyptian epidemic. The *Overland Friend of China*, of May 23, 1850, contains the following:

The city of Canton and the neighboring towns and villages are afflicted by a malignant fever. The disease is said to be fatal invariably; its victims linger 3 or 4 days though in some instances they have died in 12 hours.

This was in all probability plague. Mr. A. P. Harper, jr., in the Imperial Maritime Customs Annual Report for 1889 states that Yunnan, which is a Province about 900 miles from Hongkong, had suffered annually from plague, and Drs. Lowry and Harder record that plague has been practically endemic in Pakhoi, about 400 miles south of Hongkong, since 1874; but Mr. J. Dyer Ball, a very distinguished Chinese scholar, after a most careful and painstaking research through Chinese history states that he could find no reference to any severe epidemics.

The first and most severe epidemic of plague in Hongkong began in May, 1894, just after a large Chinese procession had taken place in

the city. At this time an epidemic of plague had existed in Canton (90 miles distant) since February 1, 1894, in which thousands of Chinese had died, Manson giving the number as about 60,000. As far as Hongkong is concerned there is no doubt that the infection of the 1894 epidemic came from Canton, and there is reason to believe that it spread to Canton from Yunnan.

At the time of the appearance of plague in Hongkong the sanitary condition of the city was deplorable. The buildings were filthy, badly lighted and ventilated and very much overcrowded, many persons living in the cellars, and surrounded with filth of every description. The drains in Chinatown were old and broken and connected with the new system in only a few places. It is estimated that at the time of the outbreak of plague there were upward of 40,000 visitors from Canton and neighboring villages crowded into Hongkong, so that conditions were favorable for an epidemic. The physicians of Hongkong were confronted with a most responsible and serious exigency. Their number was small and trained nurses were scarce, and, furthermore, at the beginning of this epidemic they knew absolutely nothing as to the cause of infection nor the manner of its spread, and they certainly deserve the world's praise for the noble and unselfish manner in which they discharged their duty.

It is interesting to note the prophylactic measures adopted at this time. Plenty of fresh air was given both patients and attendants. The attendants were allowed to smoke freely and personal cleanliness was insisted upon. All wounds and scratches on the hands were disinfected with eucalyptus oil or carbolic acid, and a carbolic mouth wash was used freely. The patient on admission was given a hot bath and his clothes were burned, and feces disinfected with quick lime or carbolic acid. The treatment was principally stimulating, aromatic spirits of ammonia and small doses of quinine and strychnine being used. Morphine was given to produce sleep and buboes were opened and treated with iodoform.

The Chinese treatment of plague at this period is very interesting, and I quote as follows:

I, Kwan, for this special purpose have here given these my revelations (by Planchette) my ardent and real desire being to look after the country and relieve the people.

Do not compare these my instructions to false words, then I shall feel honoured. If any person distributes twenty copies of this, he will save himself, and if two hundred copies, his whole family.

Take two mace each of Kwun Chung, Ngau P'ong Tsz, Shan Chi Tsz, Forsythia suspensa (Lin K'iu), Kwai Shan, Libanotis (Fong Fung), China root from Yunnan (Wan Ling); Liquorice-root (Kam Ts'o) one mace; half a mace each of Atractylodes Chinensis or Rubra (Ts'ong Shut); Sz Ch'un Justicia (or possibly leontice) (Ch'un Lin), Areca Catechu (Pan Long), Putchuk (Muk Heung); four mace of Cypress (P'in Pak); three mace each of Magnolia Hypolenca (Hau P'ok), Midsummer root (pre-

pared from one, two or three Aroid plants) (Fát Há); five mace of each of *Evonymus Vieboldianus* (?) (Wai Mau), roots of rushes (?) (phragmites) (?) (Ló Kan).

Should fever come on and buboes appear, boil the above medicines in water and take (the water) internally. In this illness sometimes there is a kind of evil wind enter^d into the chest. This wind will prevent the sufferer from swallowing and make him throw up any medicine he has taken. (If this is the case) first get one candarin weight of T'ung Kwan powder and blow into the nostrils. For simultaneous purging and vomiting and cramp; for convulsions of infants, purging and vomiting where cooling medicines do no good with slight fever in the afternoon which is light during the day and heavy at night, with the eyes turning up; for these two ailments take away from the prescription the Ngau P'ong Tsz and Shan Chi Tsz, but boil the Yunnan root the Cypress the Wai Mau and Lo with two mace each of Ts'ong Shut (*Attractylodes Chinensis* or *Rubra*) and Fok Heung, and one mace of cloves and take the water internally. As regards those who are really sincere and faithful and suffering from diseases (other than those mentioned here) for curing which different diseases the above medicines are not the proper medicine, I will personally go to their houses to treat them. I will not retract these words. I expressly give these revelations with the pen of the Planchette.

I am glad to be able to state that as far as Hongkong is concerned the above method is probably obsolete, as there are quite a number of well-educated Chinese physicians in this city and Canton at the present time. The following quotations are from the Government report of the 1894 epidemic:

The following tables give the number of different nationalities who were affected and died, with the percentage of deaths. This, of course, is only as far as hospital statistics go. The number of dead sent straight to the burial ground is not included here:

Nationalities.	Affected.	Died.	Mortality per cent.
European.....	11	2	18.2
Japanese.....	10	6	60.0
Manilamen.....	1	1	100.0
Eurasians.....	3	3	100.0
Indians.....	13	10	77.0
Portuguese.....	18	12	66.0
Malays.....	3	3	100.0
West Indians.....	1	1	100.0
Chinese.....	2,619	2,447	93.4

The Chinese figures are difficult to work out, owing to so many removals having taken place. The above are the numbers where definite results as to recovery or deaths are known.

The above statistics give a very incorrect idea of the morbidity and mortality of the disease, as hundreds of cases were not reported and numbers died in the native boats in the harbor, the bodies being thrown overboard, and others escaped to the villages of the near-by territory, to die unrecorded. Kennedytown hospital was the last hospital to be closed and received all of the patients during the last days of the epidemic, and I again quote from the Government statistics, which show very clearly the course of the epidemic.

KENNEDYTOWN HOSPITAL.

Months.	Total cases.	Cases of plague.	Sick under observation.	Deaths.
May.....	71	67	4	58
June.....	121	115	6	90
July.....	39	28	11	17
August.....	95	51	44	32
September.....	8	2	6	2
October.....	1	1	.....	1
	335	264	71	200

It will be noticed that in August and September the proportion of cases was large. It was most essential at this period that all possible foci of disease should be removed; and it must be remembered, too, that at this stage of the epidemic apparent glandular swellings were seldom met with. Of the 51 cases of plague admitted in August only 8 had visible buboes when admitted, while only 2 developed them in hospital.

The epidemic of 1894 was not only a very important one by reason of being the probable focus of infection from which recent epidemics have started, but also on account of being the epidemic in which the first discoveries were made which have influenced the modern plague sanitation, for it was in Hongkong on June 14, 1894, in Kennedytown Hospital, that Dr. Kitasato discovered the plague bacillus, which he found in the blood, buboes, and feces of the plague patients.

Following the severe epidemic of 1894, in which thousands of infected rats and fleas must have been left over in Hongkong, one would naturally expect another epidemic in 1895, but only 45 cases occurred. This small epidemic could not have been due to lack of material, for the number of cases in 1894, compared with the population (which was about 250,000), was very small, and thousands of nonimmune persons were living in Hongkong.

The Government report for 1896 shows much progress in sanitary work, such as improvement of latrines and house drains. Plague again visited the colony, commencing in the second week of the year and reaching its height on May 30. From this date the epidemic declined and disappeared in November. During this epidemic all Chinese houses in the infected districts were cleaned, limewashed, and disinfected. It is interesting to note at this period the opinion of the health officer in Hongkong as to the dissemination of plague. He says:

I still hold that this disease is not spread by inoculation through wounds (except in rare cases), but is contracted rather by breathing a foul atmosphere containing the plague bacillus of Kitasato.

The total number of cases for 1896 was 1,204, with a case mortality of 89.5 per cent. The year 1897 presents the same feature as 1895, namely, only a few cases following a big epidemic. There were reported only 21 cases for this year. The following year, 1898, how-

ever, again gave the colony an epidemic. There were 1,320 cases of plague, with a case mortality of 88.1 per cent. In 1899 there was a continuation of the epidemic of the previous year, 1,486 cases with a case mortality of 96.1 being reported. Only 7 Europeans had the disease. The year 1900 was one of importance in regard to sanitary matters, as much progress was made during the year. Still plague was present, 1,086 cases being reported. In the report for 1901 the employment of rat catchers is first mentioned, and the total number of rats caught is given as 77,301. Only 572 cases of plague were reported in 1902. During this year the entire staff, including over 200 Chinese coolies, were inoculated with Haffkine's antiplague serum. Not a case of plague occurred among them, while in the previous year 7 rat catchers out of 30 died with the disease. The year 1903 was an epidemic one and the plague cases occurred as follows:

January.....	4	July.....	85
February.....	29	August.....	32
March.....	115	September.....	9
April.....	272	October.....	5
May.....	515	November.....	4
June.....	343	December.....	2

The case mortality was 88.4 per cent and 33 of these cases were in Europeans, which is an unusually large proportion. In all of the epidemics reported in Hongkong, the disease always begins in the first part of the year, generally in April, reaches its maximum in June, and begins to decline rapidly in July or August. This period represents the rainy season in the colony, the rains being especially severe in June. The following year, 1904, had only 510 cases.

The report for 1905 shows much progress in making the Chinese houses rat proof, and during this year Yersin's serum was used for the first time in 22 cases, which gave 3 recoveries. From 1905 to 1911, with the exception of 1908, the plague epidemics were small.

During this period many improvements were made in sanitation. Disinfection was more thorough, more houses were rendered rat proof, and rat destruction was more extensive, yet in spite of all these improvements in sanitation the year 1912 had the most serious epidemic for the past 10 years. From January to September there were reported 1,848 cases, with the appalling mortality of 1,728 deaths. The large majority of the cases reported in these epidemics have been bubonic, the septicemic form coming second, with a few cases of pneumonic plague in each epidemic. At no time in the history of plague in Hongkong has the pneumonic form been at all prominent.

The European has furnished a very small proportion of the cases of plague. In most of these epidemics the white population has escaped altogether, the mortality of those affected being less than

one-half that for the Chinaman. This is certainly an interesting and strange feature, for the white man has mixed freely with the Chinaman, going in and out of Chinatown at all hours, and many of them have their places of business within the infected areas; and yet they escape infection.

The following species of rats have been found in Hongkong:

Mus rattus, *Mus decumanus*, *Mus musculus* (mice), and the so-called muskrat. The *Mus musculus* is the most abundant.

After 18 years' experience with plague the health department of Hongkong has issued the following rules, which give their latest methods of fighting bubonic plague.

1. The exclusion of rats from the houses by means of concreted ground surfaces, the prohibition of ceilings in the native quarters, the prohibition of hollow walls, and the protection of all drain openings and ventilating openings by iron gratings.

2. The collection and bacteriological examination of all rats found dead. Facilities for their collection are provided in the shape of a large number of small covered tins containing a carbolic-acid disinfectant, attached to lamp posts, electric light standards, telephone posts, etc., and in which the inhabitants are invited to put all rats found or killed by them. These tins are visited twice daily by rat collectors who take all rats found in them to the bacteriologists and change the disinfectant in the tins not less than once a week. Each rat so found is at once labeled with the number of tin from which it was taken, and if subsequently found to be plague infected a special survey is at once made of the blocks of houses in the immediate vicinity of such tin, all rat holes and rat runs are filled up with broken glass and cement, defective gratings and drains dealt with, and rat poison freely distributed to the occupants, while the occurrence of several plague-infected rats in a locality is a signal for special house-to-house survey and cleansing of that district.

3. The destruction of rats by rat poison, rat traps, and bird-lime boards, special efforts in this direction being made just before the onset of the regular plague season.

4. The encouraging of the natives to keep cats.

5. The systematic cleansing and washing out of all native dwellings at least once in three months with a flea-killing preparation. For this purpose we use an emulsion of kerosene, prepared by boiling in a steam-jacketed container, 41 gallons of kerosene with 9 gallons of water and 15 pounds of soft soaps. This mixture is highly inflammable and it is essential, therefore, the boiling should be done by steam and not by the direct flame.

This mixes readily with water, and 1 gallon is added to every 100 gallons of water used for cleansing floors, skirtings, bed boards, staircases, furniture, etc.

6. An efficient daily scavenging of all streets and lanes and the removal of refuse daily from all houses, coupled with the provision of covered metal dustbins for all houses, to reduce as far as possible the amount of food available for rats.

7. The disinfection of plague-infected premises by stripping them and washing them out thoroughly with this kerosene emulsion and the disinfection of infected bedding and clothing, carpets, rugs, etc., by superheated steam. No objection is raised to the treatment of bubonic plague cases in native hospitals and no restrictions are imposed in regard to the burial of those dead of plague, except the provision of a substantial coffin, while every effort is made to induce the native population to participate in the above preventive measures by means of lectures, addresses, and explanations given by their own leaders, and also by paid peripatetic lecturers who address street crowds.

The conclusions I have reached after a careful study of plague conditions in Hongkong are that bubonic plague is endemic and rat infection always present. Every vessel that is dry docked or goes to a wharf without proper precautions is liable to become infested with plague rats, and, in my opinion, the most important quarantine measure applicable at Hongkong is frequent sulphur fumigation of vessels.

I am indebted to Dr. Francis Clark (health officer of the colony) for the privilege of examining the official records.

PREVALENCE OF DISEASE.

IN CERTAIN STATES AND CITIES.

SMALLPOX.

Miscellaneous State Reports.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Arizona (Feb. 1-28):			Montana (Feb. 1-28):		
Counties—			Counties—		
Gila.....	20		Cascade.....	5	
Maricopa.....	39		Chouteau.....	3	
Total.....	59		Dawson.....	2	
			Fergus.....	5	
California (Jan. 1-31):			Flathead.....	8	
Counties—			Gallatin.....	7	
Alameda.....	4		Granite.....	4	
Imperial.....	4		Hill.....	1	
Total.....	8		Jefferson.....	1	
			Meagher.....	3	
Maryland, exclusive of Balti-			Missoula.....	6	
more city (Feb. 1-28):			Musselshell.....	4	
Counties—			Sanders.....	2	
Allegany.....	7		Silverbow.....	16	
Garrett.....	12		Yellowstone.....	9	
Queen Anne.....	1		Total.....	76	
Total.....	20				
			New Jersey (Feb. 1-28):		
Montana (Dec. 1-31):			Counties—		
Counties—			Atlantic.....	1	
Beaverhead.....	4		Monmouth.....	11	
Custer.....	8		Union.....	7	
Fergus.....	5		Total.....	19	
Flathead.....	9				
Meagher.....	2		Oregon (Oct. 1-31):		
Missoula.....	1		Counties—		
Powell.....	1		Baker.....	2	
Rosebud.....	9		Hood River.....	11	
Silverbow.....	2		Jackson.....	1	
Total.....	41		Linn.....	1	
			Marion.....	5	
Montana (Jan. 1-31):			Multnomah.....	9	
Counties—			Wasco.....	3	
Blaine.....	4		Total.....	32	
Cascade.....	1				
Chouteau.....	1		Oregon (Nov. 1-30):		
Custer.....	23		Counties—		
Dawson.....	1		Baker.....	2	
Fergus.....	2		Columbia.....	4	
Flathead.....	3		Grant.....	1	
Granite.....	5		Harney.....	1	
Hill.....	1		Hood River.....	6	
Meagher.....	4		Jackson.....	2	
Missoula.....	4		Lane.....	1	
Rosebud.....	4		Union.....	2	
Silverbow.....	13		Multnomah.....	33	
Valley.....	1		Polk.....	2	
Total.....	67		Sherman.....	14	
			Union.....	2	

SMALLPOX—Continued.

Miscellaneous State Reports—Continued.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Oregon (Nov. 1-30)—Contd. Counties—Continued.			Virginia (Oct. 1-31): Counties—		
Wasco.....	1	.....	Halifax.....	14	.....
Washington.....	1	.....	Prince William.....	1	.....
Total.....	72	.....	Total.....	15	.....
Oregon (Dec. 1-31): Counties—			Virginia (Nov. 1-30): Counties—		
Baker.....	5	.....	Dinwiddie.....	3	.....
Clackamas.....	1	.....	Frederick.....	4	.....
Columbia.....	5	.....	Halifax.....	22	.....
Crook.....	1	.....	Henrico.....	1	.....
Gilliam.....	1	.....	Total.....	30	.....
Harney.....	29	.....	Virginia (Dec. 1-31): Counties—		
Malheur.....	3	.....	Halifax.....	40	.....
Marion.....	4	.....	Henrico.....	10	.....
Multnomah.....	19	1	Mecklenburg.....	1	.....
Polk.....	14	.....	Pittsylvania.....	14	.....
Sherman.....	3	.....	Washington.....	5	.....
Union.....	9	.....	Total.....	70	.....
Wasco.....	6	.....		
Yamhill.....	9	.....		
Total.....	109	1			
Pennsylvania (Dec. 1-31).....		1			

City Reports for Week Ended Mar. 1, 1913.

Auburn, N. Y.....	1	.....	New York, N. Y.....	3	.....
Baltimore, Md.....	1	.....	Niagara Falls, N. Y.....	2	.....
Cambridge, Ohio.....	3	.....	Oakland, Cal.....	1	.....
Chicago, Ill.....	3	.....	Oklahoma, Okla.....	1	.....
Cincinnati, Ohio.....	2	.....	Pawtucket, R. I.....		1
Danville, Ill.....	3	.....	Peoria, Ill.....	3	.....
Duluth, Minn.....	9	.....	Philadelphia, Pa.....	1	.....
Elmira, N. Y.....	1	.....	Providence, R. I.....	1	.....
El Paso, Tex.....	1	.....	Roanoke, Va.....	1	.....
Knoxville, Tenn.....	14	.....	San Diego, Cal.....	1	.....
Lexington, Ky.....	3	.....	Spokane, Wash.....	4	.....
Los Angeles, Cal.....	2	.....	Springfield, Ohio.....	2	.....
Manchester, N. H.....	5	.....	Taunton, Mass.....	2	.....
Marinette, Wis.....	1	.....	Washington, D. C.....	5	.....
Milwaukee, Wis.....	13	.....	Zanesville, Ohio.....	3	.....
Moline, Ill.....	1	.....		

TYPHOID FEVER.

Maryland Report for February, 1913.

Places.	Number of new cases reported during month.	Places.	Number of new cases reported during month.
Maryland, exclusive of Baltimore City:		Maryland, exclusive of Baltimore City—Continued.	
Allegheny County.....	24	Calvert County.....	1
Cumberland.....	14	Lorrey P. O.....	1
Westernport.....	2	Caroline County.....	1
Western Maryland Hospital.....	1	Bethlehem.....	1
Allegheny Hospital.....	1	Carroll County.....	1
Eckhart Mines.....	1	Westminster.....	1
County Home.....	2	New Windsor.....	1
Corriganville.....	1	Cecil County.....	1
Baltimore County.....	1	Chesapeake City.....	2
St. Agnes Hospital.....	1	Elkton.....	1
Cockeysville.....	1	Charlestown.....	1
Texas.....	1	Charles County.....	1
Warren.....	1	La Plata.....	1
Falls Road.....	1	Dubois.....	1
Gardenville.....	1		

TYPHOID FEVER—Continued.**Maryland Report for February, 1913—Continued.**

Places.	Number of new cases reported during month.	Places.	Number of new cases reported during month.
Maryland, exclusive of Baltimore City—Continued.		Maryland, exclusive of Baltimore City—Continued.	
Frederick County—		Queen Anne County—	
Brunswick.....	1	Crumpton.....	1
Point of Rocks.....	1	Somerset County—	
Burkittsville.....	1	Crisfield.....	3
Plaine 4.....	1	Washington County—	
Garrett County—		Hagerstown.....	2
Bloomington.....	1	Edgemont.....	4
Grantsville.....	1	Smithsburg.....	2
Harford County—		Funkstown.....	1
Havre de Grace.....	2	Wicomico County—	
Howard County—		Salisbury.....	1
Ellicott City.....	6	Bibb.....	1
Kent County—		Wicomico.....	1
Betterton.....	2	Worcester County—	
Worton.....	1	Berlin.....	2
Montgomery County—		Ironshire.....	2
Poolesville.....	2		
Prince George County—		Total.....	102
Nottingham.....	1		
Laurel.....	1		

CEREBROSPINAL MENINGITIS.**Arizona—Maricopa and Coconino Counties.**

Dr. R. N. Looney, State superintendent of public health of Arizona, reported by telegraph March 13 that 4 cases of cerebrospinal meningitis, with 1 death, had been notified in Maricopa County and 2 cases, with 2 deaths, in Coconino County since March 1, 1913.

California—Los Angeles.

Senior Surg. Brooks, of the Public Health Service, reported by telegraph March 15, 1913, that during the week ended March 15, 7 new cases of cerebrospinal meningitis, with 3 deaths, had been notified in Los Angeles, making a total since January 1 of 34 cases, with 15 deaths.

Maryland—Report for February, 1913.

The State Board of Health of Maryland reported that 1 case of cerebrospinal meningitis had been notified at Sparrows Point, Baltimore County, during the month of February.

Texas—Port Arthur.

Acting Asst. Surg. Wister, of the Public Health Service, reported by telegraph March 15, 1913, that 4 cases of cerebrospinal meningitis, with 1 death, had been notified in Port Arthur during the week ended March 15.

Cases and deaths reported by cities for week ended Mar. 1, 1913.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Baltimore, Md.		3	New Orleans, La.	3	2
Boston, Mass.	2	1	New York, N. Y.	6	3
Chelsea, Mass.	1		Prescott, Ariz.	1	
Cincinnati, Ohio.	7	2	Richmond, Va.		1
Columbus, Ohio.	2	1	Roanoke, Va.	1	1
Jersey City, N. J.	1	1	Saginaw, Mich.	1	1
Johnstown, Pa.	1		Superior, Wis.		2
Los Angeles, Cal.	4	3	Trenton, N. J.	1	1
Lynn, Mass.	1	1	Woburn, Mass.	1	
Nashville, Tenn.	2		Worcester, Mass.	1	1
Newark, N. J.	1				

POLIOMYELITIS (INFANTILE PARALYSIS).**Maryland Report for February, 1913.**

The State Board of Health of Maryland reported that during the month of February 1 case of poliomyelitis had been notified at Laurel, Prince George County.

Cases and Deaths Reported by Cities for Week Ended Mar. 1, 1913.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Fall River, Mass.	1		New York, N. Y.	1	1
Montclair, N. J.	1		St. Joseph, Mo.	1	
New Orleans, La.	2				

ERYSIPELAS.**Cases and Deaths Reported by Cities for Week Ended Mar. 1, 1913.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Baltimore, Md.		1	Milwaukee, Wis.	2	
Binghamton, N. Y.	1		Newark, N. J.		1
Boston, Mass.		2	New Castle, Pa.	1	
Braddock, Pa.	1		New Orleans, La.		1
Bridgeport, Conn.	2		New York, N. Y.		13
Buffalo, N. Y.	7	1	North Adams, Mass.		1
Chicago, Ill.	20	6	Passaic, N. J.	1	1
Cincinnati, Ohio.	5		Philadelphia, Pa.	17	3
Cleveland, Ohio.	8		Pittsburgh, Pa.	10	
Dayton, Ohio.	2		Providence, R. I.		2
Duluth, Minn.	1		Reading, Pa.	2	
Dunkirk, N. Y.	1		St. Louis, Mo.	16	1
Erie, Pa.	1		South Bethlehem, Pa.		1
Harrisburg, Pa.	1		Yonkers, N. Y.	1	
Homestead, Pa.	1		York, Pa.	1	
Los Angeles, Cal.	4	1			

PLAGUE.**Rats Collected and Examined for Plague.**

Places.	Week ended—	Found dead.	Total collected.	Examined.	Found infected.
California:					
Cities—					
Berkeley	Feb. 22, 1913	1	138	95	
Oakland	do.	8	450	350	
San Francisco	do.	14	1,201	946	
Washington:					
City—					
Seattle	do.		632	601	

California—Squirrels Collected and Examined for Plague Infection.

During the week ended February 22, 1913, there were examined for plague infection 89 ground squirrels from San Joaquin County. No plague-infected squirrel was found.

PNEUMONIA.**Cases and Deaths Reported by Cities for Week Ended Mar. 1, 1913.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Auburn, N. Y.	4	3	Newport, Ky.	3	3
Binghamton, N. Y.	5		Norristown, Pa.	2	2
Braddock, Pa.	1		Philadelphia, Pa.	51	107
Chicago, Ill.	43	189	Pittsburgh, Pa.	35	38
Cleveland, Ohio.	53	30	Reading, Pa.	9	7
Erie, Pa.	3		Saginaw, Mich.	3	
Galesburg, Ill.	2	2	San Diego, Cal.	2	2
Los Angeles, Cal.	4	9	Schenectady, N. Y.	4	1
Manchester, N. H.	5	5	South Bethlehem, Pa.	1	2
New Castle, Pa.	1		York, Pa.	1	

SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS.**Maryland Report for February, 1913.**

The State Board of Health of Maryland reported that during the month of February, 1913, scarlet fever, measles, and diphtheria had been notified in the State, exclusive of the city of Baltimore, as follows: Scarlet fever 78 cases, measles 651 cases, diphtheria 73 cases.

Los Angeles—Measles.

Senior Surg. Brooks, of the Public Health Service, reported by telegraph March 15, 1913, that 192 new cases of measles, with 1 death, had been notified in Los Angeles during the week ended March 15, making a total of 645 cases, with 5 deaths, since January 1, 1913.

Pittsburgh—Measles.

Surg. Stoner, of the Public Health Service, reported by telegraph March 15, 1913, that during the week ended March 8 there had been notified in Pittsburgh 500 cases of measles, with 10 deaths, making a total of 6,491 cases, with 95 deaths, since the beginning of the outbreak November 1, 1912.

Cases and Deaths Reported by Cities for Week Ended Mar. 1, 1913.

Cities.	Popula- tion, United States census 1910.	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	558,485	236	21	2	308	8	42	2	32	26
Boston, Mass.	670,585	284	55	4	259	4	61	2	47	27
Chicago, Ill.	2,185,283	847	191	18	790	14	428	33	125	82
Cleveland, Ohio.	560,663	188	41	4	284	1	20	3	25	18
New York, N. Y.	4,766,883	1,699	365	41	777	12	443	12	526	195
Philadelphia, Pa.	1,549,008	649	50	12	869	4	119	1	76	71
Pittsburgh, Pa.	533,905	190	34	2	497	7	27	1	38	19
St. Louis, Mo.	687,029	266	92	5	590	7	29		62	21
From 300,000 to 500,000 inhabit- ants:										
Buffalo, N. Y.	423,715		4		170	1	18	1	26	13
Cincinnati, Ohio.	364,463	137	9	1	111	8	12		34	18
Los Angeles, Cal.	319,198	144	8		79		10		31	24
Milwaukee, Wis.	373,887	107	22	3	31	2	22		10	8
Newark, N. J.	347,469		37	1	24		35		33	12
New Orleans, La.	339,075	159	21	2	211		5		31	29
San Francisco, Cal.	416,912	174	9	2	6		4		25	22
Washington, D. C.	331,069	144	19		505	2	23		17	19
From 200,000 to 300,000 inhabit- ants:										
Jersey City, N. J.	267,779	104		1		1		1		9
Providence, R. I.	224,326	106	11	2	13		20		4	10
From 100,000 to 200,000 inhabit- ants:										
Bridgeport, Conn.	102,054	42	7	2	3		12		4	5
Cambridge, Mass.	104,839	33	6		39	1	5		7	2
Columbus, Ohio.	181,548	82	4	11			12		10	6
Dayton, Ohio.	116,577	52	8	1	5		2		5	2
Fall River, Mass.	119,295	37	2		32		19		7	3
Lowell, Mass.	106,294	38	7	2	22		8		6	4
Nashville, Tenn.	110,364	42	2		59				7	2
Oakland, Cal.	150,174	51	3	1			1		7	4
Richmond, Va.	127,628	57	3		404	1	2		5	3
Spokane, Wash.	104,402		1		4		3			7
Toledo, Ohio.	168,497	51	6		91		8		12	6
Worcester, Mass.	145,986	57	8		19		5	1	4	3
From 50,000 to 100,000 inhabit- ants:										
Altoona, Pa.	52,127	17	4				9			
Bayonne, N. J.	55,545	24	3		8		5		6	1
Brockton, Mass.	56,878	15	1		3				5	
Camden, N. J.	94,538		9		103		25		7	
Duluth, Minn.	78,466	14			24		1			3
Elizabeth, N. J.	73,409	23	1		7		7		2	2
Erie, Pa.	66,525	25	1		10		6		2	
Harrisburg, Pa.	64,186	20	1		3		4			
Hoboken, N. J.	70,324		6		18				11	4
Johnstown, Pa.	55,482	18	20	1	58		1			
Lynn, Mass.	89,336	37			48		10			3
Manchester, N. H.	70,063	30	1		26		2		2	2
New Bedford, Mass.	96,652	35	6		72		9		6	2
Oklahoma City, Okla.	64,205	8	2							3
Passaic, N. J.	54,773	18	2		8		1		2	
Pawtucket, R. I.	51,622	5								
Peoria, Ill.	66,950	21	6		33	1	4			
Reading, Pa.	96,071	46	6	1	173		2		20	3
Saginaw, Mich.	50,510	15	6		33		10		1	1
St. Joseph, Mo.	77,403	23	1		22		4		1	1
Schenectady, N. Y.	72,826	19	5	1	14		10		3	1
South Bend, Ind.	53,684	13	2		1		3	1		1
Springfield, Ill.	51,678	12	5	1	2		1			1
Springfield, Mass.	88,926	35	1		20		5		1	3
Trenton, N. J.	96,815	53	12	3	26	2	2		12	8
Wilkes-Barre, Pa.	67,105	20	1		1		9		2	
Yonkers, N. Y.	79,803	18	6		17		5		6	1
From 25,000 to 50,000 inhabitants:										
Atlantic City, N. J.	46,150	7	1		4		5		2	
Auburn, N. Y.	34,668	12			19		25		1	1
Aurora, Ill.	29,807						3			
Berkeley, Cal.	40,434	11	1		1		21		3	1
Binghamton, N. Y.	48,443	21	2	1					7	5
Brookline, Mass.	27,792	6			2		8			
Chelsea, Mass.	32,452	13	5		6		2		3	
Chicopee, Mass.	25,401	10			6		5			
Danville, Ill.	27,571	13	1	1	5		2			2

Cases and Deaths Reported by Cities for Week Ended Mar. 1, 1913—Contd.

Cities.	Popula- tion, United States census 1910.	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabi- tants—Continued.										
East Orange, N. J.	34,371		1		2		3		1	
Elmira, N. Y.	37,176	9			23		2		2	
El Paso, Tex.	39,279	33		1	9		2			6
Everett, Mass.	33,484	12			11		1		1	
Haverhill, Mass.	44,115	13	3	1	44		2		2	
Knoxville, Tenn.	36,346	14			16					2
La Crosse, Wis.	30,417	14	1	1			1		1	
Lancaster, Pa.	47,227		6		21		1		2	
Lexington, Ky.	35,099	20			5				5	4
Lima, Ohio.	50,508	12			5		1			1
Lynchburg, Va.	29,494	15			92	1	1		1	
Malden, Mass.	44,404	12	5		51		3		4	2
Newcastle, Pa.	36,280		2		66		2			
Newport, Ky.	30,309	11	1				2		1	1
Newton, Mass.	39,806	13	2		11		3			1
Niagara Falls, N. Y.	30,445	13	1		135	1	1		1	
Norristown, Pa.	27,875	11		1					1	1
Orange, N. J.	29,630	16			7		4		6	3
Pittsfield, Mass.	32,121	19	1		3		2			3
Portsmouth, Va.	33,190	14	2		5					3
Racine, Wis.	38,002	7	1		8		2			
Roanoke, Va.	34,874	18	1		35				3	2
Rockford, Ill.	45,401	22	1				1			
Salem, Mass.	43,697	17	2	1					1	2
San Diego, Cal.	39,578		2		9				1	1
South Omaha, Nebr.	26,259	10								
Superior, Wis.	40,384	15					2			4
Taunton, Mass.	34,259	22	3				4	1	1	2
Waltham, Mass.	27,834	19	2		1		2		1	2
West Hoboken, N. J.	35,403		3		12		3			
Williamsport, Pa.	31,860	9	1		7		1			1
Wilmington, N. C.	25,748	10							4	
York, Pa.	44,750	3			24				3	
Zanesville, Ohio.	28,026	9	1				8		1	
Less than 25,000 inhabitants:										
Alameda, Cal.	23,833	4	1							
Ann Arbor, Mich.	14,817	6			5		1			
Beaver Falls, Pa.	12,191	0			5					
Biddeford, Me.	17,079	8								
Braddock, Pa.	17,759		2		5		1		1	
Cambridge, Ohio.	17,327	1								
Concord, N. H.	21,477	12	1		74		1			
Clinton, Mass.	13,075	4	2		6					1
Columbus, Ga.	20,554	7								
Columbus, Ind.		3								1
Cumberland, Md.	21,839	9	1		3		2			
Dunkirk, N. Y.		2			5		1			
Galesburg, Ill.	22,089	5	1				1			
Homestead, Pa.	18,713	11			13					
Kokomo, Ind.	8,261	6			2				1	1
La Fayette, Ind.	20,081	8								
Logansport, Ind.	19,050	3	2		19		2			
Marinette, Wis.	14,610	3								
Marlboro, Mass.	14,759	8								1
Massillon, Ohio.	23,830	0	1							
Medford, Mass.	23,150	5			9		2		1	
Melrose, Mass.	15,715	4					4			
Moline, Ill.	24,190	10	1				3			
Montclair, N. J.	21,450	4					2			
Morristown, N. J.	12,507	7	1				3	1	1	
Nanticoke, Pa.	18,857	7	6		2		4			
Newburyport, Mass.	19,240	9								
North Adams, Mass.	22,019	7		1	4					
Northampton, Mass.	19,931	6					4		2	
Ottumwa, Iowa.	23,012	4	2				3			
Plainfield, N. J.	23,550	9			1				2	
Rutland, Vt.	13,546	1			101					
Saratoga Springs, N. Y.		8			4				1	
South Bethlehem, Pa.		8			4					
Springfield, Ohio.			5		1		1			
Steelton, Pa.	14,476	6			1				4	1
Wilkinsburg, Pa.		7			6		1		1	
Woburn, Mass.	18,394	4			10				1	

IN INSULAR POSSESSIONS.

HAWAII.

Notifiable diseases reported during January and February, 1913.

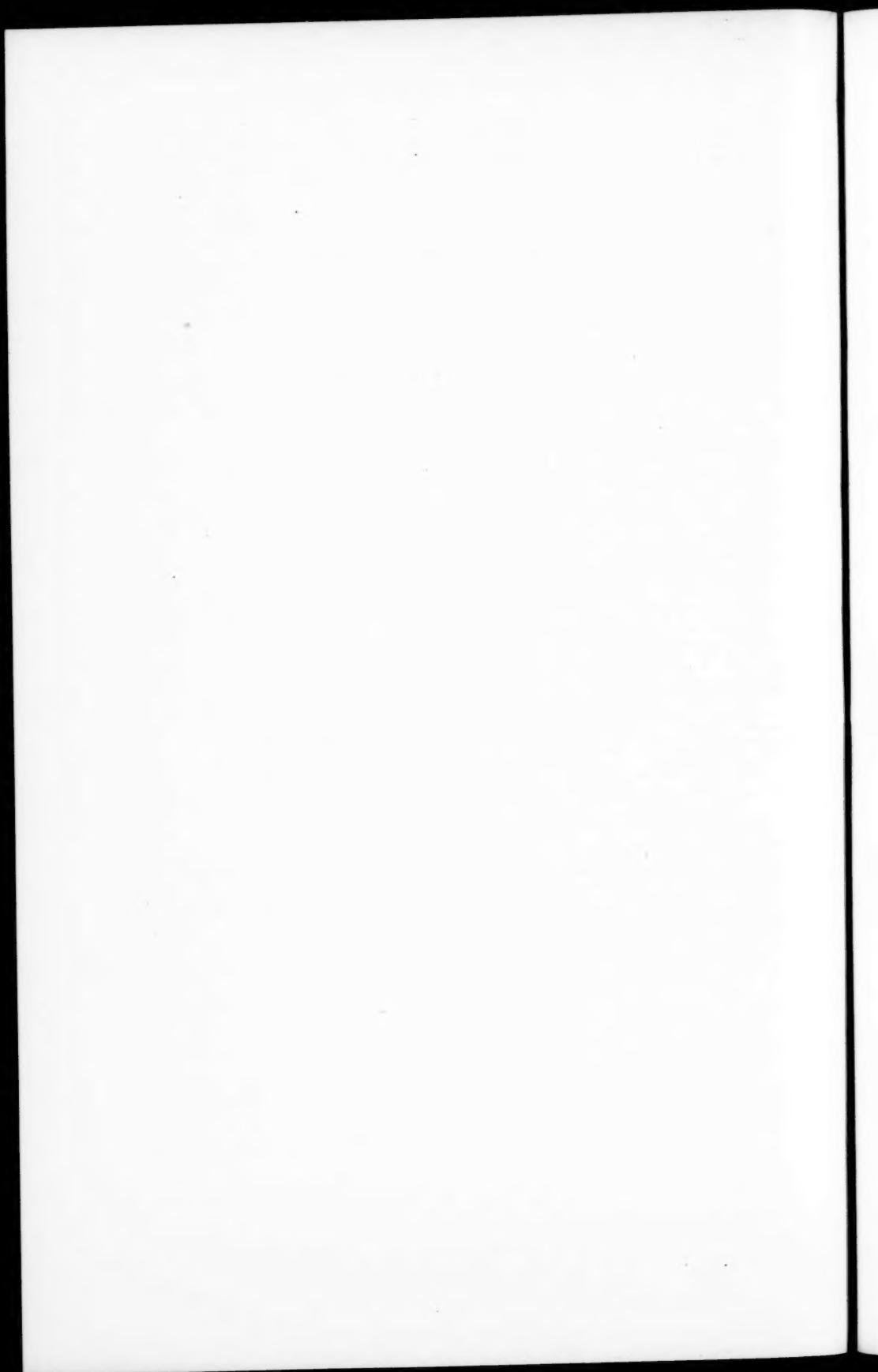
Diseases.	Janu-ary.	Febru-ary.	Diseases.	Janu-ary.	Febru-ary.
Cerebrospinal meningitis.....	1	1	Dengue.....	1	.....
Conjunctivitis follicular.....	4	1	Pertussis.....	7	6
Diphtheria.....	21	6	Plague.....	1	1
Dysentery amoebic.....	.....	1	Scarlet fever (or scarlatina).....	1	1
Enteric (typhoid) fever.....	10	26	Tetanus.....	1	1
Fever Para-typhoid.....	4	3	Trachoma.....	3	9
Leprosy.....	4	6	Tuberculosis.....	35	58
Measles.....	4	9	Varicella.....	12	7

PORTO RICO.

Rats Collected and Examined.

Passed Asst. Surg. Creel reports that during the week ended March 1, 1913, there were examined 1,550 rats, collected from various points in Porto Rico, and that of these 294 were collected from various parts of San Juan municipality.

No case of plague in man has been notified in Porto Rico since September 12, 1912, and no plague-infected rat has been found since December 19, 1912.



FOREIGN REPORTS.

CHINA.

Hongkong—Plague-Infected Rat Found.

Surg. Brown reports: During the week ended January 25, 1913, there were examined at Hongkong for plague infection 1,816 rats. One plague-infected rat was found.

CUBA.

Habana—Transmissible Diseases.

FEB. 10-20, 1913.

Diseases.	New cases.	Deaths.	Remain- ing under treat- ment.
Leprosy.....			246
Malaria.....	1		12
Typhoid fever.....	8	1	33
Diphtheria.....	18		13
Scarlet fever.....	18		20
Measles.....	14		15
Varicella.....	3		5
Paratyphoid fever.....	1		7

FEB. 21-28, 1913.

Leprosy.....			246
Malaria.....			12
Typhoid fever.....	13	1	42
Diphtheria.....	20		20
Scarlet fever.....	18	1	18
Measles.....	21		33
Varicella.....	7		11
Paratyphoid fever.....	1		5

¹ Imported from Porto Rico.

Deratization of Vessels.

A circular issued March 8, 1913, by the chief quarantine officer of the Republic of Cuba requires all vessels, whether in the coastwise or foreign trade, tied to a wharf at any port in Cuba, to be deratized at least once in six months, and every vessel wishing to tie to a wharf at any port in Cuba to present a certificate of deratization issued not more than six months previously.

Certificates of deratization issued by foreign sanitary officers may be accepted by the officers of the Cuban quarantine service provided that in their judgment the deratization was effective.

ECUADOR.

Guayaquil—Plague and Yellow Fever.

Passed Asst. Surg. Parker reports: During the month of January, 1913, 74 new cases of plague with 43 deaths and 76 new cases of yellow fever with 39 deaths were reported in Guayaquil and vicinity.

GREECE.

Patras—Smallpox.

The American consul reports: During the week ended March 9, there were reported at Patras nine deaths from smallpox and an estimated number of 100 cases present.

JAMAICA.

Quarantine Restrictions.

The following circular was issued under date of February 17, 1913, by the quarantine board at Kingston, Jamaica:

By direction of the quarantine board the circular dated January 23 last is canceled, and the restrictions set forth below are those now in force:

HABANA AND NEW ORLEANS.

Vessels from Habana or New Orleans while alongside a wharf here, must have rat guards, properly set, and of a pattern approved by the quarantine board, on all ropes and cables running from ship to shore.

PORTO RICO.

Vessels may accept first-class passengers at Porto Rico, and will be granted pratique on arrival here, provided the captain of each vessel produces to the health officer a certificate from the British consul certifying that the vessel was anchored not less than a quarter mile from the shore and that cargo was not taken on board.

Vessels which have been alongside at Porto Rico to obtain pratique here must produce a certificate of complete fumigation since they were alongside, and five days must have elapsed since the fumigation took place. Cargo not accepted.

HAITI AND SAN DOMINGO.

Steamers from Haiti and San Domingo, while alongside a wharf here must have rat guards, properly set, and of a pattern approved by the quarantine board, on all ropes and cables running from ship to shore, and at sunset gangways to be raised and not again lowered until sunrise.

Schooners from Haiti and San Domingo must anchor not less than 200 yards from the shore, load and unload all cargo from lighters.

AZORES, ARGENTINE, BRAZIL, VENEZUELA, AND PATAGONIA.

Vessels from the Azores, Argentine, Brazil, Venezuela, and Patagonia may accept first-class passengers and will be granted pratique on arrival here, provided they are five days out, and the captain of each vessel produces a certificate from the British consul certifying that the vessel was anchored not less than a quarter mile from the shore, and that cargo was not taken on board.

Vessels which have been alongside at the Azores, Argentine, Brazil, Venezuela, and Patagonia, OR ANY OTHER COUNTRY INFECTED WITH PLAGUE, in order to obtain full pratique here, must produce a certificate of complete fumigation satisfactory to the board certifying that the vessel was fumigated since being alongside and five days must have elapsed since the fumigation took place. Cargo not accepted.

BALTIMORE.

All on board vessels arriving from Baltimore will be medically examined for small-pox by either the health officer at Port Royal or at the outports before pratique is granted.

Mails may in all cases be accepted.

CHARLES DON,
Secretary Quarantine Board.

JAPAN.

Cholera.

Acting Asst. Surg. Worden at Yokohama reports: During the week ended February 11 there were reported in Japan 5 new cases of cholera, of which number 2 occurred in Chiba ken and 3 in Shidzuoka ken.

Contagious Diseases.

Contagious diseases were reported in Japan exclusive of the island of Taiwan as follows:

MONTH OF DECEMBER, 1912.

Diseases.	Cases.	Deaths.	Diseases.	Cases.	Deaths.
Cholera.....	114	94	Smallpox.....		
Dysentery.....	233	146	Typhus fever.....		
Typhoid fever.....	2,104	572	Scarlet fever.....	117	12
Paratyphoid fever.....	152	26	Diphtheria.....	2,421	691

YEAR ENDED DEC. 31, 1912.

Cholera.....	2,722	1,678	Smallpox.....	14	1
Dysentery.....	34,643	5,709	Typhus fever.....	1	11
Typhoid fever.....	31,520	6,288	Scarlet fever.....	1,207	146
Paratyphoid fever.....	4,049	467	Diphtheria.....	19,251	4,760

¹ Osaka.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.**Reports Received During Week Ended Mar. 21, 1913.****CHOLERA.**

Places.	Date.	Cases.	Deaths.	Remarks.
Dutch East Indies: ¹				
Borneo—				
Bandjermasin.....	Nov. 22-25.....	1	1	
Samarinda.....	Oct. 27-Nov. 2....	25	25	
Java—				
Batavia.....	Jan. 26-Feb. 1....	10	8	
Madioen.....	Nov. 3-9.....	3	2	
Samarang.....	Nov. 8-Dec. 9....	68	56	
Surabaya.....	Nov. 15-28.....	2	2	
Sumatra—				
Air Tiris.....	Dec. 3-15.....	3	3	
Benkoelen.....	Nov. 3.....	1	—	
Koeoh.....	Dec. 3-15.....	4	9	
Roembo.....	do.....	2	2	
Telokbetong.....	Nov. 20-Dec. 10..	119	9	
India:				
Bassein.....	Jan. 25.....	1	1	
Bombay.....	Jan. 26-Feb. 15..	18	14	
Negapatam.....	Jan. 12-18.....	10	10	
Japan.....	Feb. 5-11.....			Total: Cases, 5. Total year 1912: Cases, 2,722; deaths, 1,678, exclusive of Taiwan. Total Jan. 1-Feb. 11: Cases, 82.
Chiba ken.....	do.....	2	—	
Shidzuoka ken.....	do.....	3	—	
Turkey in Asia:				
Haifa.....	Dec. 21.....	—	1	
Karassi.....	Jan. 30-Feb. 12..	—	2	
Kartal.....	do.....	9	3	
Tiberias.....	Dec. 3-25.....	129	68	

YELLOW FEVER.

Brazil:				
Manaos.....	Feb. 16-22.....	2	2	
Ecuador:				
Agua Piedra.....	Jan. 1-31.....	5	2	
Bucay.....	Jan. 1-15.....	1	1	
Duran.....	Jan. 1-31.....	8	5	
Guayaquil.....	do.....	56	30	
Milagro.....	do.....	3	1	
Naranjito.....	do.....	3	—	

PLAGUE.

China:				
Hongkong.....	Jan. 29-Feb. 1....	1	1	Total Jan. to Sept., 1912: Cases, 1,848; deaths, 1,728
Ecuador:				
Duran.....	Jan. 1-31.....	2	1	
Guayaquil.....	do.....	68	42	
Milagro.....	do.....	4	—	
Dutch East Indies:				
Java—				
Kederi.....	Nov. 17-Dec. 21..	213	192	
Madioen.....	do.....	16	16	
Paseroean Residency.....	do.....	354	347	
Surabaya.....	do.....	18	18	
Egypt:				
Gizeh Province.....	Jan. 1-Feb. 3....	5	3	
India:				
Bombay.....	Jan. 26-Feb. 15..	73	63	Mar. 13: Still present.
Calcutta.....	Jan. 26-Feb. 1....	—	9	
Provinces.....				Total Dec. 29-Nov. 1: Cases, 21,707; deaths, 17,705.
Delhi.....	Dec. 29-Feb. 1....	28	21	
Bombay.....	do.....	2,580	1,917	
Madras.....	do.....	1,144	829	
Bengal.....	do.....	29	29	
Ujhar and Orissa.....	do.....	4,341	3,470	
United Provinces.....	do.....	10,041	8,524	

¹ Bulletin Quarantenaire d'Egypte, Feb. 13, 1913.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.**Reports Received During Week Ended Mar. 21, 1913—Continued.****PLAGUE—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
India—Continued.				
Provinces—Continued.				
Punjab.....	Dec. 29-Feb. 1....	872	719	
Burma.....	do.....	388	342	
Central Provinces..	do.....	183	142	
Mysore.....	do.....	931	681	
Hyderabad.....	do.....	662	576	
Central India.....	do.....	16	10	
Rajputana.....	do.....	475	443	
Kashmir.....	do.....	7	1	
North West Provinces..	do.....	1	1	
Mauritius.....	Dec. 19-26.....	18	13	

SMALLPOX.

Aden:				
Arabia.....	Feb. 11-17.....	1		
Canada:				
Hamilton.....	Feb. 1-28.....	17		
Montreal.....	Mar. 2-8.....	11	1	
Niagara Falls.....	Feb. 1-28.....	9		
Quebec.....	Feb. 24-Mar. 8....	3		
Chile:				
Punta Arenas.....	Jan. 1-31.....	1		
China:				
Harbin.....	Dec. 1-31.....	6		
Hongkong.....	Jan. 26-Feb. 8....	15	10	
Tientsin.....	Jan. 26-Feb. 1....		1	
Dutch East Indies:				
Java—				
Samarang.....	Jan. 26-Feb. 1....	225	12	
Egypt:				
Alexandria.....	Feb. 12-18.....	3		
Cairo.....	Jan. 22-Feb. 4....	2	1	
France:				
Paris.....	Feb. 16-22.....	1		
Greece:				
Athens.....	Feb. 10.....	1		
Patras.....	Mar. 10.....		9	Epidemic.
Piræus.....	Jan. 1-31.....	16		
India:				
Bombay.....	Jan. 26-Feb. 15....	25	8	
Karachi.....	Feb. 2-15.....	4	3	
Madras.....	Feb. 2-8.....	10		
Italy:				
Palermo.....	Feb. 9-15.....	1		
Turin.....	Feb. 17-Mar. 2....	4		
Japan:				
Mexico:				
Aguascalientes.....	Feb. 24-Mar. 2....	3		
Durango.....	Feb. 1-28.....		52	
Juarez.....	Mar. 1.....			
San Luis Potosi.....	Dec. 1-21.....	3		
Veracruz.....	Feb. 16-Mar. 1....	7		
Newfoundland:				
St. Johns.....	Feb. 23-Mar. 1....	1		
Russia:				
Moscow.....	Feb. 2-8.....	1		
Riga.....	Dec. 1-31.....	2		
St. Petersburg.....	Jan. 26-Feb. 15....	13	3	
Warsaw.....	Nov. 24-Dec. 7....	10	2	
Spain:				
Barcelona.....	Feb. 9-22.....		18	
Madrid.....	Jan. 1-31.....		22	
Valencia.....	Feb. 9-Mar. 1....	26	2	
Straits Settlements:				
Singapore.....	Feb. 19-25.....	1		
Turkey in Europe:				
Constantinople.....	Feb. 16-22.....		18	
West Indies:				
Grenada.....	Mar. 10.....			Present.

Total, year 1912: Cases, 14; deaths, 1.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1912, to Mar. 14, 1913.

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Bulgaria:				
Eski Saghra.....	Dec. 9.....	2	.....
Sofia.....	Nov. 21-Dec. 16.....	6	1	
Shumla.....	Dec. 30.....	18	.....
China: Foochow.....	Nov. 20-Dec. 2.....	.....	.....	Isolated cases.
Dutch East Indies:				
Borneo—				
Pontrank.....	Oct. 6.....	1	.....
Samarinda.....	Oct. 9.....	1	.....
Singawang.....	Oct. 8-Nov. 1.....	1	1	
Java—				
Batavia.....	Nov. 9-23.....	32	21	Feb. 6, present.
Do.....	Jan. 19-25.....	4	3	
Madison.....	Sept. 15-Nov. 2.....	189	103	
Megalang.....	Oct. 7-12.....	9	6	
Paseroean Residency.....	Sept. 20-26.....	2	1	
Samarang.....	July 19-Nov. 7.....	515	423	
Surabaya.....	Oct. 16-25.....	2	1	
Sumatra—Jambi.....	Sept. 18-24.....	1	.....
India:				
Bombay.....	Nov. 17-Jan. 25.....	184	129	
Calcutta.....	Nov. 9-Jan. 18.....	.....	331	
Cochin.....	Oct. 10-Nov. 9.....	6	6	
Madras.....	Nov. 24-Jan. 25.....	26	25	
Negapatam.....	Nov. 11-16.....	9	9	
Rangoon.....	Nov. 1-30.....	2	2	
Indo-China: Saigon.....	Aug. 20-Oct. 27.....	42	38	
Japan.....				Total July 10-Feb. 4: Cases, 2,803; deaths, July 10-Dec. 31, 1,584, exclusive of Taiwan.
Aita Ken.....	Dec. 2.....	1	.....
Chiba Ken.....	Nov. 23-Feb. 4.....	42	.....
Fukushima Ken.....	Dec. 5.....	1	.....
Hiardo Islands.....	Sept. 15-Dec. 1.....	30	.....
Hioga Ken.....	Nov. 27-Dec. 19.....	22	.....
Hiroshima Ken.....	Nov. 23.....	1	.....
Ibaraki Ken.....	Dec. 6.....	2	.....
Iwate Ken.....	Dec. 16.....	1	.....
Kanagawa Ken.....	Nov. 24-Jan. 14.....	22	.....	Total Nov. 23-Feb. 4: Cases, 55 Sept. 25-Dec. 7: 9 cases from vessels.
Yokohama.....				
Kochi Ken.....	Nov. 28-Dec. 4.....	3	.....
Minami Tokaki gun.....	Sept. 15-Dec. 2.....	40	.....
Nagasaki Ken.....				Nagasaki Ken and outlying islands Sept. 15-Dec. 2: Cases, 188; deaths, 134, including previous reports.
Nagasaki city.....	Sept. 15-Dec. 2.....	10	4	
Osaka Fu.....	Nov. 23-Dec. 3.....	14	.....
Saga Ken.....	do.....	5	.....
Sasebo.....	Sept. 15-Dec. 2.....	7	.....
Shidzuoka Ken.....	Dec. 3-Feb. 4.....	54	.....
Taiwan (Formosa).....				Total year 1912: Cases, 333; deaths, 256.
Tokushima Ken.....	Sept. 15-Dec. 1.....	65	.....	Not previously reported.
Tokyo Fu.....	Nov. 23-Feb. 4.....	108	.....
Tokyo.....				Oct. 2-Dec. 7: Cases, 273, and in vicinity, 342.
Wakamatsu Ken.....	Nov. 26.....	1	.....
Russia:				
Odessa.....	Jan. 8-21.....	5	2	Nov. 18-20: 1 case from s. s. Bosnian from Constantinople. Confined in the quarantine barracks.
Siam:				
Bangkok.....	Oct. 13-Jan. 4.....	.....	6	
Straits Settlements—Singapore.....	Nov. 17-23.....	2	2	
Turkey in Asia.....				Total. Nov. 17-23: Cases, 160; deaths, 218.
Adana—				
Adana.....	Nov. 17-Dec. 2.....	2	2	
Aleppo—				
Aleppo.....	Nov. 24-Dec. 2.....	3	3	
Alexandretta.....	do.....	3	2	
Angora—				
Angora.....	Nov. 24-Dec. 11.....	29	23	
Balikesir.....	Nov. 24-Dec. 2.....	.....	1	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.**Reports Received from Dec. 27, 1912, to Mar. 14, 1913—Continued.****CHOLERA—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Turkey in Asia—Continued.				
Beirut—				
Merdijoun.....	Dec. 3-11.....		15	Present.
Tabariyeh.....	Dec. 13-22.....			
Brusa.....	Nov. 17-Dec. 11..	26	38	
Castamoni.....	Nov. 17-Dec. 2...	6	4	
Dierbekir.....	do.....	8	2	
Hedjaz—				
Jedda.....	Nov. 25-Dec. 14..	395	393	Among returning pilgrims.
Medina.....	Dec. 3-11.....		6	Dec. 3-11: Deaths, 3,607.
Mekka.....	Nov. 17-23.....	111	172	
Ismidt.....	Nov. 17-Dec. 2...	3	1	
Mosul.....	do.....		2	
Sinope.....	Dec. 3-11.....	1	4	
Smyrna.....	Nov. 17-Dec. 2...	3	1	
Tarsus.....	Nov. 24-Dec. 2...	2	1	
Turkey in Europe:				
Constantinople.....	Dec. 3-Jan. 28....	1,598	787	Total, Nov. 5-Jan. 28: Cases, 2,515; deaths, 1,245.
Zanzibar.....	Nov. 8-Dec. 21....	131	130	Total, Aug. 5-Dec. 23: Cases, 943; deaths, 912, including previous reports from Mwera, Chwaka, and Mokoton. Chwaka district, Oct. 4-Dec. 31, 332 cases, not included in previous reports.
At sea.....				Nov. 18-20: 1 fatal case on s. s. Bosnian, en route from Constantinople to Odessa.

YELLOW FEVER.

Brazil:				
Bahia.....	Jan. 24-Feb. 23.....	9	1	
Manaos.....	Jan. 5-Feb. 1.....	4	4	
Ecuador:				
Agua Piedra.....	Dec. 1-31.....	7	4	
Bucay.....	Nov. 15-Dec. 31.....	3	2	
Duran.....	Nov. 1-Dec. 31.....	3	3	
Guayaquil.....	do.....	25	16	
Do.....	Feb. 18-24.....	16	11	Total Jan. 1-Feb. 24: Cases, 124; deaths, 69.
Milagro.....	do.....	2	2	
Naranjito.....	do.....	3	2	
Senegal:				
Dakar.....	Dec. 7.....			Present.
Venezuela:				
Caracas.....	Nov. 1-Dec. 31.....	9	2	In September 2 deaths and in October 1 death not previously reported. Feb. 7, 1 case.
Do.....	Jan. 1-31.....	2		

PLAGUE.

Afghanistan:				
Tchehel-Bagdareh.....	Sept. 1-30.....			And vicinity 100 deaths daily. Present to Oct. 29.
Brazil:				
Bahia.....	Jan. 12-25.....	4	1	
Pernambuco.....	Nov. 1-Dec. 31....		9	
Rio de Janeiro.....	Nov. 3-Feb. 1.....	17	7	Year 1912: Cases, 21.
Santos.....	Dec. 1.....	2	2	
British East Africa:				
Kiambu.....	Nov. 16-Oct. 21....	2		
Kisumu.....	Dec. 8-28.....	7		
Mombasa.....	Oct. 1-Dec. 25....	16	12	Free Nov. 18.
Nairobi.....	Nov. 16-Jan. 13...	5	1	
Canary Islands:				
Teneriffe—				
Santa Cruz.....	Feb. 21-27.....		5	
Chile:				
Iquique.....	Jan. 8-19.....	7	4	
Taltal.....	Oct. 22-28.....	3		

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1912, to Mar. 14, 1913—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy.....	Jan. 17.....			Present and in vicinity.
Kulangsü.....	do.....	3		International settlement of Amoy.
Hoihow.....	Nov. 1-30.....		1	Do.
Hongkong.....	Jan. 12-18.....	1		
Manchuria.....	Dec. 14.....			Present along the railway between Harbin and Chang-Chun.
Pakhoi.....	Dec. 1-31.....	30		
Shanghai.....	Nov. 18-Dec. 15.....		2	Dec. 18, present in vicinity of the French settlement.
Swatow.....				Jan. 9, in vicinity.
Dutch East Indies:				
Java—				
Kediri.....	Oct. 6-Nov. 16.....	105	103	
Madison.....	do.....	66	64	
Paseroean Residency.....	do.....	244	247	
Surabaya.....	do.....	10	10	
Ecuador:				
Duran.....	Nov. 1-Dec. 31.....	4	1	
Guayaquil.....	do.....	139	52	
Do.....	Feb. 18-24.....	22	11	Jan. 1-Feb. 24: Cases, 123; deaths, 61.
Milagro.....	Dec. 1-31.....	8	1	
Egypt.....				Total Jan. 1-Dec. 31: Cases, 884, deaths, 441. Jan. 1-Feb. 8: Cases, 43; deaths, 26.
Alexandria.....				Mar. 4, 1 fatal case.
Cairo.....	Dec. 30.....	1	1	
Port Said.....	Dec. 29.....	1	1	
Do.....	Jan. 1-Feb. 8.....	3	1	
Provinces—				
Assiout.....	Jan. 22-Feb. 1.....	5	3	
Behera.....	Nov. 29-Dec. 12.....	2	1	
Do.....	Jan. 1-2.....	2	1	
Benisouef.....	Jan. 22-Feb. 2.....	4	2	
Charkieh.....	Nov. 29-Dec. 12.....	3	2	
Do.....	Jan. 2-30.....	6	5	
Fayoum.....	Jan. 19-Feb. 11.....	8	5	
Galioubeh.....	Jan. 1-7.....	1	1	
Garbieh.....	Jan. 1-17.....	2	1	
Do.....	Nov. 23-Dec. 17.....	3		
Girgeh.....	Jan. 1-Feb. 3.....	4	1	
Do.....	Dec. 21-25.....	1	1	
Menouf.....	Jan. 1-30.....	6	3	
Do.....	Oct. 1-Dec. 31.....	13	7	
Minieh.....	Nov. 28-Dec. 29.....	7	4	
Do.....	Jan. 23-Feb. 5.....	2	1	
Hawaii:				
Kukuihaele.....	Jan. 11-31.....	2	2	
India:				
Bombay.....	Nov. 17-Jan. 25.....	61	52	
Calcutta.....	Nov. 9-Jan. 25.....		74	
Madras.....	Dec. 29-Jan. 4.....	1	1	
Karachi.....	Nov. 19-23.....	2	2	
Rangoon.....	Oct. 1-Nov. 30.....	68	68	
Provinces.....				Total Oct. 27-Dec. 28: Cases, 25,212; deaths, 19,863.
Delhi.....	Oct. 27-Dec. 28.....	31	14	
Bombay.....	do.....	6,785	5,121	
Madras.....	do.....	1,833	1,337	
Bengal.....	do.....	60	59	
Bihar and Orissa.....	do.....	1,269	1,025	
United Provinces.....	do.....	7,844	6,001	
Punjab.....	do.....	952	709	
Burma.....	do.....	95	85	
Central Provinces.....	do.....	404	301	
Mysore.....	do.....	1,506	1,114	
Hyderabad.....	do.....	1,498	1,212	
Central India.....	do.....	70	60	
Rajputana.....	do.....	2,862	2,824	
Kashmir.....	do.....	3	1	
Indo-China: Saigon.....	Aug. 20-Dec. 16.....	58	36	
Japan:				
Taiwan (Formosa).....				Total, year 1912: Cases, 223; deaths, 185.
Mauritius.....	Oct. 11-Dec. 19.....	202	129	
Morocco: Rabat.....	Nov. 1.....	3		Among the military

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1912, to Mar. 14, 1913—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
New Caledonia:				
Numea.....	Sept. 17-Oct. 17...	8	5	
Do.....	Oct. 29-Dec. 2.....			7 cases with 2 deaths among Europeans and 22 fatal cases among natives.
Peru:				
Departments—				
Ancachs.....	July 1-31.....	4		
Do.....	Aug. 1-31.....	4	3	Mollendo, Nov. 17-Jan. 12: Cases, 15; deaths, 4. Jan. 21, 2 cases, with 1 death.
Arequipa.....	July 1-31.....	7	2	
Do.....	Aug. 1-31.....	5	3	
Callao.....	July 1-31.....	1	1	Present in September; Dec. 2-Jan. 12: Cases, 7.
Ferrinhaf.....	Dec. 23-Jan. 12.....	1		
Ica.....	do.....	1		
Lambayeque.....	Dec. 2-22.....	7		Present in September.
Jayanca.....	do.....			Present.
Libertad.....	July 1-31.....	8	2	
Do.....	Aug. 1-31.....	12	7	
Cosma.....	Dec. 2-22.....			Do.
Paijan.....	do.....			Do.
Salaverry.....	Dec. 23-Jan. 12.....	1		
San Pedro.....	Dec. 2-Jan. 12.....	27		
Trujillo.....	do.....	44		
Lima.....	July 1-31.....	3	2	
Do.....	Aug. 1-31.....	4	2	Dec. 2-22: Cases, 2.
Piura—				
Catacaos.....	Dec. 2-Jan. 12.....			Present.
Paita.....	do.....			Do.
Piura.....	Dec. 23-Jan. 12.....			Do.
Sulanna.....	Dec. 2-22.....			Do.
Philippine Islands:				
Manila.....	Nov. 10-Jan. 25.....	14	10	
Provinces.....				Third quarter, 1912: Cases, 8; deaths, 7.
Russia:				
Don, territory.....	Nov. 1-Jan. 12.....			In 6 localities. 38 cases with 22 deaths.
Hutor Popova (estate).....	Nov. 1-15.....	20	12	Esaoul district.
Moscow.....	Dec. 29-Jan. 11.....	3	1	
Transbalkal district—				
Verneudinsk.....	Oct. 18-28.....	3	3	Near Nerchinsk.
Trans-Caspian Ty. Merv.....	Dec. 9-21.....	29	29	Pneumonic.

SMALLPOX.

Arabia: Aden.....	Jan. 14-20.....	1		
Abyssinia: Adis Ababa.....	Nov. 24-Dec. 21.....			Present.
Algeria:				
Departments—				
Algiers.....	Oct. 1-31.....	11		
Constantine.....	do.....	11		
Oran.....	Oct. 1-Dec. 31.....	170	10	
Do.....	Jan. 1-31.....	11	3	
Argentina: Buenos Aires.....	Nov. 1-Dec. 31.....		7	
Austria-Hungary:				
Galicia.....	Nov. 10-Dec. 7.....	3		
Fiume.....	Jan. 14-Feb. 10.....	2		
Moravia.....	Jan. 17-25.....	2		
Trieste.....	Dec. 8-Feb. 1.....	26		
Brazil:				
Para.....	do.....	2		
Pernambuco.....	Nov. 1-Jan. 15.....		149	
Rio de Janeiro.....	Nov. 3-Feb. 1.....	27	10	
British Columbia: Vancouver.....	Feb. 2-8.....	1		
British East Africa: Mombasa.....	Dec. 1-31.....	17	10	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

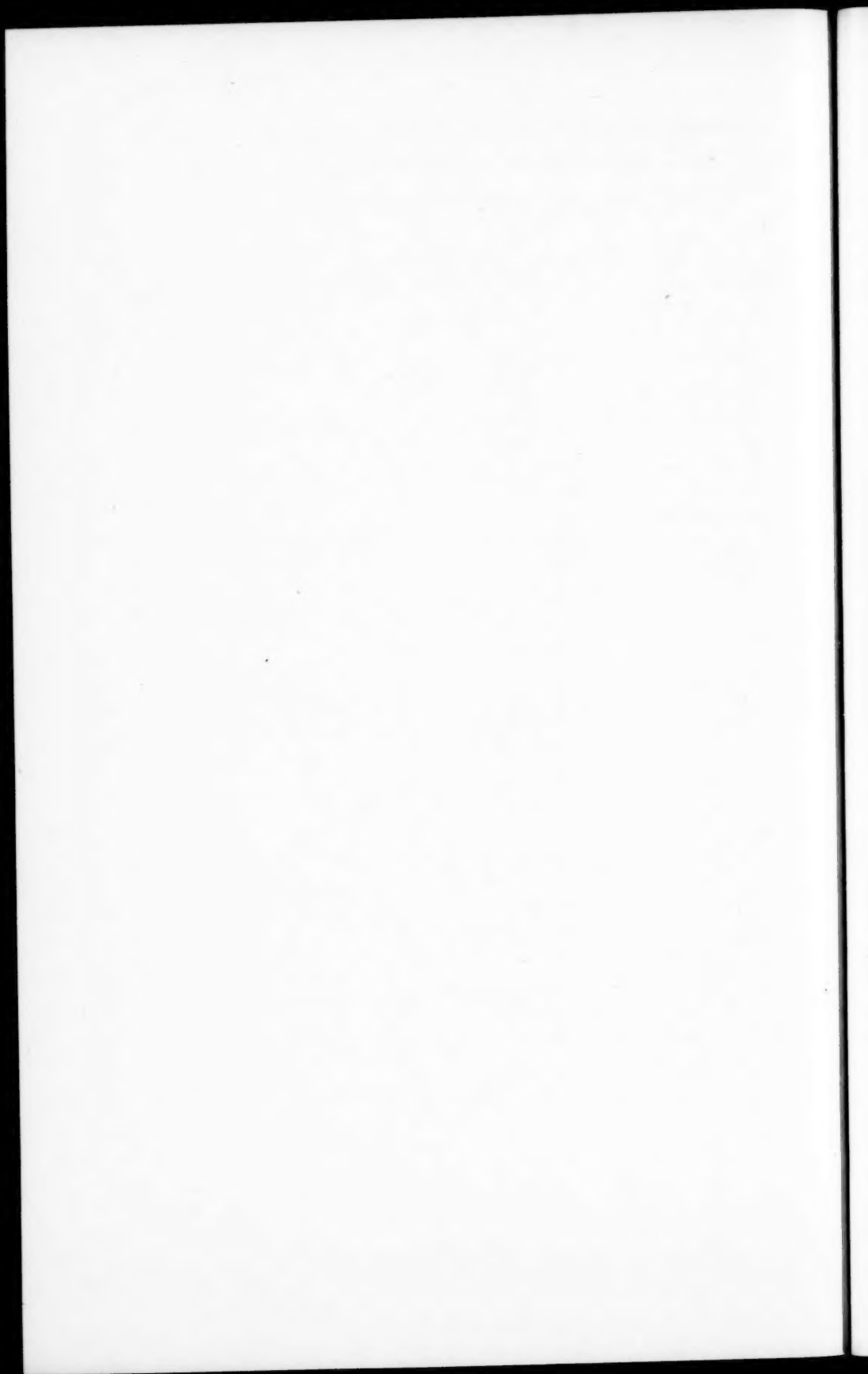
Reports Received from Dec. 27, 1912, to Mar. 14, 1913—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Canada:				
Provinces—				
British Columbia—				
Fernie.....	Feb. 23-Mar. 1....	12	.....
Ontario—				
Hamilton.....	Jan. 1-31.....	31	.....
Ottawa.....	Jan. 4-Feb. 22.....	30	.....
Toronto.....	Dec. 1-Feb. 15.....	8	.....
Windsor.....	Feb. 9-Mar. 1.....	4	.....
Quebec—				
Montreal.....	Dec. 15-Mar. 1.....	97	.....
Quebec.....	Dec. 15-Feb. 22.....	25	.....
St. Johns.....	Jan. 12-Mar. 1.....	17	.....
Chile: Punta Arenas.....	Oct. 31-Nov. 30.....	3	.....	Oct. 31, 1 case in vicinity.
China:				
Amoy.....	Jan. 4-16.....	.....	.....	Present. Kulangsu. Jan. 12-25, 1 case.
An Kho.....	Jan. 4.....	.....	.....	Epidemic; 2 days' journey from Amoy.
Chungking.....	Nov. 3-Jan. 4.....	.....	.....	Present.
Dalny.....	Jan. 12-18.....	1	1	
Hankow.....	Dec. 29-Jan. 4.....	1	.....
Hoihow.....	Jan. 3.....	.....	.....	Do.
Hongkong.....	Nov. 24-Jan. 25.....	23	13	
Nanking.....	Dec. 7-Feb. 8.....	.....	2	Do.
Shanghai.....	Nov. 18-Feb. 9.....	23	118	Deaths among natives.
Tientsin.....	Nov. 17-Dec. 14.....	.....	2	
Costa Rica: Limon.....	Feb. 1.....	2	2	
Dutch East Indies:				
Java—				
Batavia.....	Nov. 9-Jan. 4.....	26	7	Jan. 5-11, 10 cases, with 5 deaths in the district, mainly in Samarang.
Samarang.....	Oct. 4-24.....	57	23	
Do.....	Jan. 5-25.....	528	149	
Egypt:				
Alexandria.....	Dec. 9-Jan. 28.....	6	1	
Cairo.....	Nov. 12-Feb. 21.....	9	3	
Port Said.....	Dec. 3-31.....	1	1	
France:				
Marseille.....	Nov. 1-Jan. 31.....	.....	3	
Nantes.....	Jan. 5-Feb. 22.....	3	.....
Paris.....	Dec. 1-Feb. 15.....	31	1	
Germany:				
Breslau.....	Jan. 19-25.....	1	.....	Total: Nov. 24-30, 5 cases not included in report, p. 2231, vol. xxvii; Dec. 1-Feb. 15, 20 cases.
Hamburg.....	Jan. 10-25.....	2	.....
Gibraltar.....	Dec. 9-15.....	1	.....
Great Britain:				
Liverpool.....	Jan. 1-4.....	1	.....
New Castle on Tyne.....	Feb. 9-15.....	15	.....
Honduras: Trujillo.....	Feb. 2-8.....	1	.....
India:				
Bombay.....	Nov. 17-Jan. 25.....	21	7	
Calcutta.....	Dec. 1-Jan. 18.....	.....	14	
Karachi.....	Dec. 1-Jan. 21.....	11	1	
Madras.....	Dec. 1-Jan. 25.....	9	5	
Rangoon.....	Oct. 1-Nov. 30.....	11	3	
Indo-China: Saigon.....	Aug. 20-Dec. 23.....	3	3	
Italy:				
Palermo.....	Dec. 15-Feb. 8.....	6	.....
Turin.....	Feb. 3-9.....	1	.....
Japan.....				Jan. 1-Nov. 30, 1912: Cases, 14; deaths, 1.
Nagasaki.....	Nov. 1-30.....	1	.....
Taiwan (Formosa).....		.....	.....	Year 1912: Cases, 4.
Yokohama.....	Jan. 1-13.....	2	.....	From s. s. Pera from London via ports.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.**Reports Received from Dec. 27, 1912, to Mar. 14, 1913—Continued.****SMALLPOX—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Mexico.....				Feb. 16: Cases, 1,500 to 2,000, with 10 per cent of deaths, mainly along the western coast. Jan. 30-Feb. 16: Presentin Aguierre, Cajame, Corral, Esperanza, Navojca, Puga, and Tarin.
Aguascalientes.....	Dec. 9-Feb. 16.....		10	
Chihuahua.....	Dec. 9-Mar. 2.....		14	
Durango.....	Dec. 1-Jan. 31.....		65	
Guadalajara.....	Jan. 5-11.....	1		
Mazatlan.....	Jan. 1-7.....	2		
Mexico.....	Nov. 17-Jan. 4.....	36	15	
Salina Cruz.....	Nov. 17-Jan. 25.....	6	2	
San Luis Potosi.....	Sept. 15-21.....	1		
Sonora—				
Agua Zarca.....	Jan. 30.....	2		
Nogales.....	do.....	1		
Venacruz.....	Jan. 26-Feb. 8.....	3	1	1 case imported from Pasco del Macho.
Netherlands: Rotterdam.....	Dec. 22-28.....		1	
Peru:				
Callao.....	Sept. 1-14.....			Present.
Lima.....	do.....			Do.
Mollendo.....	Nov. 24-Dec. 7.....	5	1	
Salaverry.....	Dec. 4-11.....	1		
Philippine Islands: Manila.....	Dec. 21.....			1 case removed from s. s. Mauban to the San Lazaro Hospital. Third quarter, 1912: Cases, 9; deaths, 0.
Portugal: Lisbon.....	Dec. 1-Feb. 15.....	43		
Roumania.....				Total, Oct. 1-31: Cases, 6.
Russia:				
Batoum.....	Dec. 1-31.....	1		
Libau.....	Dec. 16-Jan. 4.....	2		
Moscow.....	Dec. 8-Jan. 25.....	7	2	
Odessa.....	Nov. 17-Jan. 18.....	8	3	
St. Petersburg.....	Nov. 24-Dec. 28.....	96	10	
Warsaw.....	Sept. 22-Nov. 23.....	15	2	
Siberia—				
Omsk.....	Jan. 1-27.....	7		
Vladivostok.....	Dec. 15-28.....	4	1	
Do.....	Jan. 1-13.....	4		
Servia: Belgrade.....	Dec. 22-28.....	2		
Siam: Bangkok.....	Nov. 10-Jan. 4.....		5	
Spain:				
Almeria.....	Dec. 1-Jan. 31.....		54	
Barcelona.....	Dec. 1-Feb. 1.....		96	
Cadix.....	Nov. 1-Dec. 31.....		7	
Madrid.....	do.....		34	
Malaga.....	Dec. 1-31.....		1	
Seville.....	Dec. 31-Jan. 31.....		43	
Valencia.....	Nov. 14-Feb. 8.....		47	
Straits Settlements: Singapore..	Nov. 24-Jan. 4.....	2	1	
Sweden: Stockholm.....	Oct. 8-21.....	3		
Switzerland:				
Cantons—				
Aargau.....	Dec. 15-Jan. 18.....	2		
Basel.....	Nov. 14-Feb. 15.....	20		
Grisons.....	Dec. 1-Feb. 1.....	15		
Turkey in Asia: Beirut.....	Dec. 8-Feb. 15.....	62	11	
Turkey in Europe: Constanti- nople.....	Dec. 1-Feb. 15.....		109	
Uruguay: Montevideo.....	Feb. 18.....			Present.
Zanzibar.....	Nov. 8-Jan. 21.....	20	2	



SANITARY LEGISLATION.

STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

KENTUCKY.

Common Drinking Cups—Use in Public Places Prohibited (Laws of 1912, Chap. 60, Approved Mar. 13, 1912).

SECTION 1. The use of the common drinking cup on railroad trains and in railroad stations, public hotels, boarding houses, restaurants, or steamboats, in stores or other publicly frequented places in Kentucky is hereby prohibited. No person or corporation in charge of the aforesaid places, and no person or corporation shall permit on said railroad train, in railroad stations, public hotels, boarding houses, restaurants, steamboats, stores, or any publicly frequented place in Kentucky, the use of the drinking cup in common. There must also be posted in a conspicuous place, by the individual or corporation, by the drinking water contained in any of the places mentioned in foregoing paragraph, a warning cardboard, with the above printed thereon in large letters, so they can be easily read. Any person or corporation violating the provisions of this act shall, upon conviction, be fined in any sum not less than \$1 and not more than \$10, and each day's violation of any of the provisions of this act shall be considered a separate offense, punishable by fine in the amount named above.

Sec. 2. All laws inconsistent with this act are hereby repealed.

Opium and its Alkaloidal Salts—Regulating the Sale of (Laws of 1912, Chap. 86, Approved Mar. 14, 1912).

SECTION 1. Opium or its alkaloidal salts or their derivatives, or any admixture containing opium or its alkaloidal salts or their derivatives, shall be sold or dispensed only by a registered pharmacist upon the original written, dated, and signed prescription of a legally licensed physician, or dentist, or veterinary surgeon, and only one sale shall be made on said prescription, and each such prescription shall state upon its face the quantity of said opium, its alkaloidal salts or their derivatives, also the name of the patient and the date said prescription is filled. And opium or its alkaloidal salts or their derivatives, or any admixture containing opium or its alkaloidal salts or their derivatives, shall be sold at wholesale only to registered pharmacists, legally qualified physicians, dentists, and veterinary surgeons: *Provided, however,* That any preparation, patent, proprietary or otherwise, containing not more than two grains of opium or one-fourth of a grain of its alkaloidal salts or their derivatives to the ounce or admixture of ipecac and opium commonly known as Dover's powder, or the antispasmodic mixtures of the National Formulary official at the time of sale, or lotions, liniments, suppositories, ointments, and plasters plainly labeled "For external use only," may be sold or dispensed by registered pharmacists without any prescription. Any registered pharmacist, physician, dentist, or veterinary surgeon or any person not a registered pharmacist, licensed physician, dentist, or veterinary surgeon, who shall prescribe for, procure for, or sell, or dispense to any person opium or its alkaloidal

salts or their derivatives, or any admixture containing opium or its alkaloidal salts or their derivatives, or otherwise deal in the same for any purpose other than for the legitimate use as herein provided, shall thereby render himself amenable to the penalties as in this section provided: *And provided further*, That the provisions of this section shall not apply to the sales made by a registered pharmacist in the wholesale drug business to registered pharmacists, legally licensed physicians, dentists, or veterinary surgeons. Any wholesaler violating any of the provisions of this act shall render himself amenable to the penalties in this section provided. Any person failing to comply with the requirements of this section shall be deemed guilty of a misdemeanor, and upon conviction shall pay a fine of not less than \$20 nor more than \$100.

SEC. 2. That the sum of \$5,000 annually, or so much thereof as may be found necessary by the Kentucky Board of Pharmacy, is hereby appropriated for the use of said board for the enforcement of this act. No expenditures under this act shall be paid by the auditor of public accounts unless same have been properly allowed by the Kentucky Board of Pharmacy, and the claims or vouchers for same made out in duplicate, giving an itemized statement of expenditures incurred, which claims shall be filed with the auditor of public accounts. Said board shall give bond for the faithful performance of their duties, and their said account shall be approved by the governor of this Commonwealth.

SEC. 3. All acts and parts of acts in conflict with this act are hereby repealed.

WASHINGTON.

County Boards of Health—Regulation and Duties of (Regulations State Board of Health Adopted July 15, 1912).

SECTION VII.

1. The county auditors, as clerks of the county boards of health, must report the names of all officers and employees of such boards to the State commissioner of health in the month of January of each year.

2. County boards of health may adopt any general rules and regulations, provided such rules and regulations are not contrary to the State board of health, for the control of contagious or infectious diseases; or, in lieu thereof, the rules and regulations of the State board of health shall become the rules and regulations of the county board of health, and the county board of health shall make a standing order that all their officers and employees promptly and strictly enforce all the rules of the State board of health.

3. Rules of all county boards of health and all changes whenever made must be sent to the State board of health for approval before becoming effective.

4. County boards of health shall give the county health officer ample authority to employ sanitary police and to incur necessary indebtedness in the performance of his duties during the time when the county board of health is not in session.

5. If an epidemic of a contagious disease occurs in any county, the county board of health must promptly provide some proper place of detention for all such cases as can not be isolated at their residences without danger to the general public.

6. The county board of health shall appoint a sufficient number of sanitary officers to strictly enforce all the rules of the State board of health, county board of health, or orders of the county health officer.

7. The county board of health shall hold not less than four meetings annually, and at such meetings the county health officer, as executive officer of the board, shall file a written report, which report shall contain a statement covering contagious diseases, the reports from city health officers other than those of cities of the first class, a general report upon sanitary conditions in both the rural sections and incorporated cities of

the county, and also a summary of the amounts expended by the county board of health. Such reports shall be entered by the secretary of the county board of health and, together with the minutes of the meeting, shall constitute the permanent records of such board, and the county board of health shall send a copy of such reports to the State board of health.

Communicable Diseases—Prevention of the Spread of, through Food or Drink (Regulations State Board of Health adopted July 15, 1912).

SECTION VIII.

1. No city or town shall hereafter empty or discharge its sewage into any body of water or stream used for drinking purposes by any municipality until such sewage has been rendered harmless by some method approved by the State board of health.

2. The use, except by diversion, of the waters of any natural or artificial storage or distributing reservoir of any public water supply for any commercial or industrial purpose, is hereby prohibited.

3. Camping, picnicing, or hunting upon the watershed, or boating, fishing, or bathing in the waters of any public water supply is hereby prohibited.

4. No person shall cut or store any natural ice to be sold or delivered within any incorporated city without first receiving a permit from the local health officer, which permit shall certify that the proposed source of such ice has been inspected and approved, and no natural ice stored or cut without such permit shall be sold in any incorporated city in this State.

5. No person delivering milk or food products to any house under quarantine or isolation shall permit any article used in the delivery of such food products to be taken into the house except in containers or wrappings that can be destroyed.

6. No vessel or containers which have been used or handled by persons suffering from diseases requiring quarantine or isolation shall be used to hold or convey milk until they have been thoroughly sterilized.

7. The sale of milk or any other dairy or food products whatever from premises where any disease requiring quarantine or isolation is present is forbidden unless all such milk, dairy, or food products are prepared and handled and all receptacles used in the preparation of such products are used and handled exclusively by a person or persons entirely segregated from the sick person or persons and then only upon the written permission of the local health officer.

8. No person suffering from open tuberculosis of the lungs or proven to be a chronic typhoid or diphtheria carrier shall be allowed to work at any occupation involving the handling of milk, dairy, or food products in an unwrapped state. The local health officer upon complaint from any citizen shall investigate all alleged instances of infraction of this rule, and if he finds the facts to be as alleged he shall thereupon issue a written order to such individual and his employer, if employed by another, forbidding such person to handle any milk, dairy, or unwrapped food products thereafter.

9. Since it has been repeatedly demonstrated that what is popularly known as the common drinking cup is dangerous and an unquestionable and frequent source of communication of infectious and contagious diseases, the use of the common drinking cup within the State of Washington, on railroad trains, passenger vessels or other common carriers, or in waiting rooms maintained in connection with common carriers, in all State, county, and municipal public buildings, in public parks or on public thoroughfares, in public, private, or parochial schools or other educational institutions, in theaters and other places of amusement, or in any room or corridor open to the public of any hospital, sanatorium, or asylum, is hereby prohibited after the 1st day of October, 1912. After the 1st day of October, 1912, any person or corporation, any manager or superintendent responsible for the management of any common carrier, corporation,

any officials responsible for the care and maintenance of any State, county, or municipal public building, parks or thoroughfares, any board of school directors or board of trustees of any public, private, or parochial schools, or other educational institutions, or board of trustees, owner or superintendent of any hospital, sanatorium, or asylum, who furnishes any drinking cup for public and common use, or any person, corporation, manager, or superintendent of any common carrier, corporation, or any officials responsible for the care and maintenance of any State, county, or municipal public buildings, parks or thoroughfares, and any board of school directors or trustees of any public, private, or parochial school or other educational institutions, or board of trustees or owner or superintendent of any hospital, sanatorium, or asylum, or owner or manager of any theater or other place of amusement, who shall permit upon any common carrier or within the waiting rooms connected therewith, within any State, county, or municipal public building, at any public, private, or parochial school, or other educational institution, within any theater or place of amusement, within those rooms or corridors open to the public of any hospital, sanatorium, or asylum the common or public use of the drinking cup, shall be held responsible for failure to obey reasonable regulations of the State board of health for the prevention, suppression, and control of dangerous, infectious, and contagious diseases: *Provided*, That the provisions of this rule shall not be held mandatory for those parts of any public buildings, railroad or steamship waiting rooms, and theaters which are not open to the public.

**Communicable Diseases—Prevention of the Transmission of by Common-Carriers
(Regulations State Board of Health Adopted July 15, 1912.)**

SECTION IX.

REGULATION 1. No person having reason to believe that he or she is suffering from Asiatic cholera, diphtheria, or membranous croup, plague, scarlet fever, small pox, typhus fever, yellow fever, leprosy, chickenpox in adults, or measles, or who has been exposed to such disease, shall enter, nor shall any person permit anyone under his or her care so infected or exposed to enter any public conveyance or common carrier.

REG. 2. All conductors on railroad trains and street cars and captains of boats are required to observe all passengers on their train, car, or boat, and if they have any reason to suspect that any such passenger is suffering from any contagious or infectious disease, they shall immediately notify the nearest health officer or company physician (when health officer is not available), located on their route, by the most direct and most speedy means possible of their belief, and such health officer or company physician must meet such railroad train at the station, or such street car or boat at the nearest possible point, and make a thorough examination of such person and determine whether such disease exists.

REG. 3. When the health officer or physician notified, as provided in regulation 2 shall find any person in a car, boat, or other public conveyance to be afflicted with smallpox, diphtheria, scarlet fever, or other quarantinable disease, the car, boat, or other public conveyance shall be turned over to the health officer or physician who shall treat such conveyance as infected premises. When in the judgment of the health officer or physician the case is in such early stage of development that other passengers are not affected, the patient shall be removed from the conveyance and it shall be allowed to proceed. If the health officer or physician shall deem that the exposure is such as to have infected the other passengers, he shall call upon the person in charge to remove infected conveyance from service at the first station where suitable accommodations can be secured and such health officer or physician shall notify the health officer in whose jurisdiction the infected conveyance is left.

REG. 4. No person shall spit on the floor, furnishings, or equipment of any public conveyance, eating room, depot, depot platform, waiting room, deck, or wharf. Each

common carrier is hereby required to post and display in each day coach, smoking compartment, or boat a placard in form as follows:

For cars: Spitting or throwing of refuse on the floor, furnishings, or vestibule of this car is prohibited by law.

Waiting rooms, eating rooms, toilets: Spitting or throwing of refuse on the floor or furnishings of this room is prohibited by law.

Boats: Spitting or throwing of refuse on the deck, floors or furnishings, or toilet rooms of this boat is prohibited by law.

REG. 5. All general waiting rooms and smoking rooms must be provided with one or more spittoons, which must be placed on the floor. Water must be kept in all spittoons.

REG. 6. Each sleeping car shall be furnished with 1 spittoon for each section or compartment. Each smoking compartment in day coaches, chair, parlor, and sleeping cars must be furnished with at least 2 spittoons. Each smoking car shall be provided with at least 12 spittoons. Each combination smoking car shall be provided with at least 6 spittoons. Each boat carrying passengers must provide 1 or more spittoons for each stateroom and general smoking saloon.

REG. 7. The drinking water and ice supply used in stations and on public conveyances must contain no ingredients deleterious to health. In the construction of new equipment all receptacles for drinking water should be so constructed that they can not be opened readily by anyone except those having charge of same. Nothing but ice and water shall be placed in the receptacles used for the storage of drinking water. The receptacle for drinking water shall be kept thoroughly clean at all times and shall be drained and flushed at route terminals.

When a water-borne disease has developed in epidemic form in a municipality, water from such place for car tanks shall not be used without the approval of the State board of health.

REG. 8. The use of the common drinking cup is prohibited in all public conveyances and in waiting rooms.

REG. 9. All public conveyances, including toilet rooms therein, must be kept in a reasonably clean condition at all times. Dry sweeping and dusting of occupied conveyances is strictly prohibited.

REG. 10. At cleaning terminals all passenger equipment shall be thoroughly cleaned and after such cleaning the hoppers, urinals, and toilet floors shall be mopped with a 1 or 2 per cent solution of formaldehyde.

REG. 11. Upon arrival at cleaning terminals, sleeping cars shall be cleaned as follows:

The windows, doors, and ventilators shall be opened, the upper berths let down, the seat bottoms and backs lifted out, the mattresses, blankets, pillows, curtains, etc., loosely arranged for airing. If the weather permits, the removable articles mentioned above shall be taken out of the car, dusted and aired in the open, and exposed to the sunlight for a time. The rest of the cleaning of the car shall be carried out as directed for day coaches under regulation 10.

REG. 12. Sleeping cars shall be fumigated at least once every two months and after the car is known to have carried any infectious disease. Fumigation shall be carried out before the carpets have been removed or the cleaning of the car begun and record posted in car showing where and when done. Preparation for fumigation shall be as follows:

Close all outside doors, windows, deck sash, and ventilators. Arrange one or more windows on each side of the car so that they can be opened from the outside to avoid the necessity of entering the car while the formaldehyde fumes are strong. Open all interior doors. Pull the seats forward and loosen the pillows in the pillow boxes. Open the upper berths and lay the headboards across the seats so that one corner will rest upon the seat arm. Lay the lower mattresses on the headboards, with the middle

arched upward, the ends being pushed together. Raise the curtain poles and hang the curtains near the end by a single hook. Throw the blankets over the curtain poles, making as few folds or thicknesses of the blanket as possible. Arch the upper mattresses in the upper berths.

Fumigation shall be carried out along the lines approved by the State board of health. After the car has been fumigated it must remain closed for a period of at least three hours, after which time the doors and windows shall be opened as soon as possible. On rainy or damp days the car need not be kept closed after fumigation for a longer period than one hour.

REG. 13. Porters shall not sleep in sleeping cars unless a special compartment in the sleeper and special bedding are provided for their use by the companies operating same.

REG. 14. In all public conveyances the food boxes, refrigerators, lockers, drawers, and cupboards shall be kept thoroughly sweet and clean at all times.

REG. 15. The common roller towel shall be abolished on all common carriers and in waiting rooms.

REG. 16. All toilet rooms, water-closets, urinals, and toilet appliances in stations shall be cleaned daily, and when vaults or surface receptacles are used in connection with closets at stations, such vaults or surface receptacles shall receive at least a weekly treatment with fresh lime or other agent approved by the State board of health. All closets shall be locked and the key kept by the agents, who shall deliver it to patrons on request. There shall be notice, "Key at the office" posted on the closet door.

REG. 17. Cesspools and vaults must be made water-tight and flyproof in communities having a population of 150 or upward.

MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

ALEXANDRIA, VA.

Communicable Diseases—Control and Notification of (Ordinance Adopted July 23, 1912).

SEC. 17. * * * (3) When any physician knows that a person whom he is called upon to visit is infected with smallpox, diphtheria, scarlet fever, or any other disease dangerous to public health he shall at once give notice to the health officer, who shall cause such placards to be put up on conspicuous parts of the house in which the patient resides as may be necessary, which placards shall be furnished by the board of health.

If any member of the board of health shall have complaint on oath made to him or if he shall have reason to think that there is any lot, tenement, boarding house, hotel, or on board any vessel in the city any person infected with smallpox or other contagious, infectious, or dangerous disease, it shall be the duty of said member of the board of health to issue a mandate in writing addressed to the health officer, requiring him to go to the place so suspected and examine the person or persons diseased, if any, and report in writing to the board of health his opinion of such disease and whether the public's interest requires any action. If it appear to the board of health that such person or persons are infected with smallpox or any other contagious, infectious, or dangerous disease then the said board of health shall prescribe such rules and regulations as may be deemed necessary to prevent the spread of such disease and may establish a quarantine at the place or places where such disease exists and inhibit any ingress or egress to and from the same. They may by proper orders prevent any railroad train, electric car, steamboat, or other conveyance from taking on or putting off passengers or freight at any point or points in or near the infected district.

Whenever the health officer shall have notice of any contagious disease in any house or family in the city, he shall immediately give notice thereof to the superintendent of the public schools and principals of private schools in the city. When a householder knows that a person within his family or under his roof or in his employment, is sick of smallpox, diphtheria, scarlet fever, or any other infectious or contagious diseases, he shall immediately give notice to the health officer and upon the death, removal, or recovery of such person, the room occupied and the articles used by and for such diseased or infected person, shall be disinfected by such householder in a manner approved by the board of health. No pupil shall be allowed to attend the public or private schools of the city while any member of the household to which said pupil belongs is sick with smallpox, varioloid, diphtheria, membranous croup, scarlet fever, cholera, or any other contagious disease, and during a period of two weeks after the death, recovery, or removal of such sick person; any pupil coming from such household shall be required to present to the teacher of the school he or she is attending or desires to attend, a certificate from the attending physician or board of health of the facts necessary to entitle his or her admission in accordance with the above regulations. With respect to scarlet fever, diphtheria, smallpox, and varioloid, no patient will be considered well and free from isolation until the attending physician or some physician known to be acting with the board of health, certifies that he has personally inspected the patient, and found that the patient is no longer a source of danger. No certificate shall be received by the board until at least three weeks have elapsed from the beginning of convalescence.

(4) When an undertaker is called to a house where a person has died of smallpox, varioloid, cholera, diphtheria, membranous croup, scarlet fever, or any other contagious disease, he shall give immediate notice to the health officer. As soon as possible after the death of a person from any such disease, a private funeral shall be held at which none but the immediate relatives and such persons as may be necessary to conduct the funeral, shall be present. The body shall in no case be carried to the grave in a hack or other public passenger conveyance.

(5) The foregoing rules relative to contagious diseases shall be in force until the health officer shall remove from the premises where the illness has occurred, the placard which notify the public of the existence of the disease, and such placards shall not be removed except by direction of the health officer.

(6) Every person who neglects or refuses to comply with or violates the foregoing section and the several provisions thereof, shall be fined not less than one nor more than twenty dollars, for each offense.

SEC. 18. No child shall be admitted to the public schools of the city unless he or she can show a good vaccination scar, or who can not produce a certificate of a reputable physician, that he or she has been properly vaccinated within the next preceding four years from the date of admission, or is otherwise immune.

SEC. 19. All owners or occupiers of rooms or houses in which there have been cases of tuberculosis or other contagious or infectious diseases (whether they result fatally or not) shall be required to fumigate or disinfect such house or rooms as soon as possible. If such owner or occupier is financially unable to do so, he shall call upon the health officer who will have it done at the expense of the city.

SEC. 20. Whenever contagious or infectious diseases occur or are prevailing in the city of Alexandria, and after provision shall be made by the board of health, under the authority of the city council, by the securing or erection of houses or suitable buildings for the reception of such sick or infected persons and the establishment of quarantine limits, the health officer, together with the family physician charged with the care of the patients affected or suffering with contagious, infectious, or dangerous diseases, may, when absolutely necessary, cause the removal of all persons and patients as are affected or suffering from such contagious, infectious, or dangerous diseases, to

the hospital or houses prepared for the reception of such cases and within the quarantine limits.

SEC. 21. It shall be unlawful for any person to harbor or conceal in any place within the corporate limits or within 1 mile of the corporate limits any person or persons exposed to smallpox.

BAYONNE, N. J.

Domestic Animals, etc.—Permits to be Obtained for the Keeping of (Regulations Board of Health Adopted June 20, 1912).

SEC. 51. No person or persons or corporation shall have or keep, upon any premises within the built-up portion of said city, any cattle, sheep, goats, or swine without a permit from this board, which permit shall be renewable annually and registered in the office of the board, and for each and every animal the sum of \$1 shall be paid.

SEC. 52. No person shall keep, or allow to be kept, in any dwelling house or part thereof, any horse, cattle, swine, goats, or fowls, nor allow the same nor any dangerous or offensive animal to run at large in said city.

SEC. 53. No persons shall keep any chickens, ducks, geese, or pigeons within the city without a permit from this board, which permit shall be renewed annually, and for each and every permit so granted the sum of \$1 shall be paid and shall be revocable when deemed advisable by this board.

Dealers in live chickens, ducks, geese, or other fowls must have a separate room in which to keep same, said room to be kept in a clean and sanitary condition and subject to the conditions of this board, and they shall not keep any live chickens, ducks, geese, or other fowls where fresh meat or food of any kind is exposed for sale. Any person or persons violating this section, or any part thereof, shall, on conviction thereof, pay a fine or penalty of \$10.

SEC. 54. No person owning, occupying, or having charge of any stable or other premises shall keep or allow thereon or therein any dog or other animal which shall by noise disturb the quiet or repose of any person therein or in the vicinity. No person or persons shall own or maintain a dog, unless the same is licensed by this board, said license to be renewed on the first day of June in each year and shall cost the sum of \$2 for each male and \$5 for each female dog, except when such female has been spayed or altered or when confined in kennels for the purpose of breeding, the license fee for such females to be the same as for males. Kennel license shall cost the sum of \$9. Applicants for license for spayed females shall produce a certificate from the person who performed the operation. All dogs are to be kept on the owner's or keeper's premises, but may be on the public thoroughfare when muzzled with a wire or box muzzle or when accompanied by its owner or keeper attached to a leash, said leash to be not more than 4 feet long. When any dog is found running at large, officers of this board or members of the police department are to destroy it at once. Any person or persons violating any part of this section shall, on conviction thereof, pay a fine or penalty of \$5.

BELLEVUE, OHIO.

Maternity Houses and Lying-in Hospitals (Regulations Board of Health adopted Mar. 21, 1912).

SECTION 1. Any person now engaged in the occupation of conducting a maternity boarding house or lying-in hospital in the city, or any person hereafter, before engaging in the occupation of conducting a maternity boarding house or lying-in hospital, must secure an approval of a license to engage in such occupation from the city board of health, to be issued by the State board of health.

SEC. 2. Whoever maintains a maternity boarding house or lying-in hospital shall post his license in a conspicuous place on the licensed premises.

DES MOINES, IOWA.**Nuisances—Owners to Prevent by Keeping Unoccupied Buildings Closed (Ordinance adopted Nov. 11, 1912.)**

SEC. 47. The owners or agents of unoccupied buildings or sheds in the city shall keep them closed at all times against persons who may enter and commit nuisance therein.

LOS ANGELES, CAL.**Plumbing Fixtures, Water-closets, Urinals, Sinks, Slop Hoppers and Cesspools (Ordinance No. 25033, adopted May 7, 1912).**

SECTION 1. It shall be unlawful for any person, firm, or corporation to use or maintain, or to cause or permit to be used or maintained, any water-closet, urinal, sink, slop hopper or other plumbing fixture, unless the same is connected with a cesspool constructed in accordance with the ordinances of the city of Los Angeles, or with an officially accepted sewer; provided, that intercepting hoppers may be maintained and used.

SEC. 2. It shall be unlawful for any person, firm, or corporation to use or maintain, or to cause or permit to be used or maintained, any broken or defective water-closet, urinal, sink, slop hopper, or other plumbing fixture, or any flushtank that is so defective as not to cleanse sufficiently the water-closet bowl.

SEC. 3. It shall be unlawful for any person, firm, or corporation to use, or maintain, or to cause or permit to be used or maintained, any water-closet, urinal, sink, slop hopper or other plumbing fixture the waste water or sewage from which is discharged under any building or upon the surface of the ground.

SEC. 4. It shall be unlawful for any person, firm, or corporation to use or maintain or to cause or permit to be used or maintained, any water-closet, urinal, sink, slop hopper, or other plumbing fixture, unless the same is effectively trapped and vented so as to prevent the escape or passage of sewer gas or air from the sewer or the contents of the sewer through or into such fixture; except that waste-pipe connections may be made to soda-fountain fixtures, saloon and bar fixtures, dentists' fountain cuspidors, and lavatories in barber shops, without being vented, when a special permit therefor is issued by the board of public works.

SEC. 5. It shall be unlawful for any person, firm, or corporation, either as owner, agent, manager, or tenant, to cause or permit any pipe or plumbing connection, or any water-closet, urinal, sink, slop hopper, or other plumbing fixture, to be open to the atmosphere for more than 24 hours by reason of any break, opening or aperture of any kind, except such opening as may be necessary for the ordinary and customary use of such fixture.

SEC. 6. It shall be unlawful for any person, firm, or corporation to repair or stop, or to cause or permit to be repaired or stopped, any break or aperture in any pipe or plumbing fixture or plumbing connection used for conducting sewage or waste water, except in the following manner: Cast iron or wrought iron shall be repaired by means of a threaded plug or an efficient clamp or calking; lead or brass pipes shall be repaired by means of solder. No nonmetallic substance shall be used in making any such repair.

SEC. 7. It shall be unlawful for any person, firm, or corporation to use or maintain or to cause or permit to be used or maintained, any soil pipe or waste pipe that is constructed of any material other than cast iron, wrought iron, steel, brass, or lead.

SEC. 8. It shall be unlawful for any person, firm, or corporation to use or maintain, or to cause or permit to be used or maintained, any plunger water closet, Philadelphia hopper or pan closet, or any water closet where the supply to the container or bowl is direct from the building service pipes; provided that a Flushometer valve of a type approved by the board of public works may be used.

SEC. 9. It shall be unlawful for any person, firm, or corporation to use or maintain, or to cause or permit to be used or maintained, any range or latrine water closet unless the same is constructed of cast iron or wrought iron and enameled with porcelain, except that the seat of any such closet may be of other material than that specified in this section.

SEC. 10. It shall be unlawful for any person, firm, or corporation to use or maintain, or to cause or permit to be used or maintained, any water closet that is not flushed with 3 gallons or more of water at each discharge.

SEC. 11. It shall be unlawful for any person, firm, or corporation to use or maintain, or to cause or permit to be used or maintained, any sink or water closet the space underneath which is inclosed or the floor and walls beneath and around which are not well painted.

SEC. 12. It shall be unlawful for any person, firm, or corporation to maintain, or to cause or permit to be maintained, any vent pipe that is connected with a soil pipe or waste pipe when such vent pipe terminates within 8 feet of any window, door, or air shaft of any building that is inhabited by human beings.

SEC. 13. It shall be unlawful for any person, firm, or corporation to use or maintain, or to cause or permit to be used or maintained, any overflowing or open cesspool, or any cesspool the top or any wall of which shall have caved in, or any cesspool that is of insufficient capacity for the volume of sewage or waste water that is discharged thereinto.

SEC. 14. It shall be unlawful for any person, firm, or corporation to use or maintain, or to cause or permit to be used or maintained, any soil pipe, waste pipe, drain pipe, vent pipe, house drain, or sewer that shall have become clogged so that the flow of sewage or water through such pipe or sewer is stopped or impeded.

SEC. 15. It shall be unlawful for any person, firm, or corporation to maintain, or to cause or permit to be maintained, any water-closet, urinal, sink, slop hopper, or other plumbing fixture, that shall remain unused for a period of 15 days, unless the same shall be sealed in such manner as to prevent the escape or passage of sewer gas or air from the sewer through such fixture.

SEC. 16. Any water-closet, urinal, sink, slop hopper, or other plumbing fixture, and any pipe, sewer, or cesspool, the use or maintenance of which is made unlawful by this ordinance, is hereby declared to be a nuisance, and the health commissioner is hereby authorized, empowered, and directed to condemn the same and to cause and compel the abatement of such nuisance and to compel the removal thereof.

SEC. 17. In the event that any pipe or plumbing fixture or plumbing connection is declared by the health commissioner to be defective and is ordered to be removed, the owner of such pipe, plumbing fixture, or plumbing connection may, within one day after the service of notice upon such owner to remove such pipe, plumbing fixture, or plumbing connection, request the appointment of referees to determine whether or not such pipe, plumbing fixture, or plumbing connection is defective and whether the same should be removed; such request shall be made in writing and shall be filed with the health commissioner. Upon the filing of such request one referee shall be appointed by the health commissioner, one by the owner filing such written request, and the third by the two referees so selected. The said referees shall be appointed within one day after the filing of the request therefor, as hereinbefore provided. Each of such referees shall be a licensed architect, or a licensed physician, or a master plumber. Such referees shall examine the pipe, plumbing fixture, or plumbing connection in question and render a report thereon within two days after their appointment. The decision of such referees shall be binding upon the owner making the request for the appointment of such referees and upon the health commissioner. Every owner requesting the appointment of referees, as hereinbefore provided, shall at the time of filing the request therefor deposit with the health commissioner the sum of \$50, to

defray the expenses of the examination and report of such referees. Such referees shall be paid their actual expenses and such compensation as may be determined by the health commissioner; provided, that the total expense of examination shall not exceed the sum of \$50. If the total amount of the expenses of any examination shall amount to less than the sum of \$50, the remainder of such sum shall be returned to the person, firm, or corporation depositing the same. In case of any vacancy in the board of referees, such vacancy shall be filled by the party who made the original appointment of the person whose place is vacated.

SEC. 18. That any person, firm, or corporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punishable by a fine of not less than \$5 nor more than \$500, or by imprisonment in the city jail for a period of not more than six months, or by both such fine and imprisonment.

Each such person, firm, or corporation shall be deemed guilty of a separate offense for every day during any portion of which any violation of any provision of this ordinance is committed, continued, or permitted by such person, firm, or corporation, and shall be punishable therefor as provided by this ordinance.

SEC. 19. That Ordinance No. 20813 (New Series), approved August 27, 1910, be, and the same is hereby, repealed; provided, that any such repeal shall not affect or prevent the prosecution and punishment of any person, firm, or corporation for any act done or permitted in violation of any ordinance which may be repealed by this ordinance, and shall not affect any prosecution or action which may be pending in any court for the violation of any ordinance repealed by this ordinance.

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